Annual Sanitary Reports

Sanitary Commissioner for the Government of Bombay

for the years

1916, 1917 & 1919 to 1922

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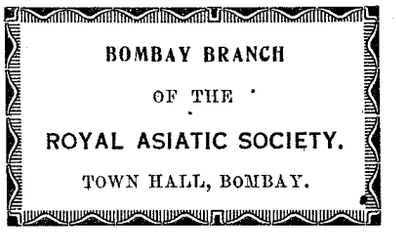

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ANNUAL SANITARY REPORT, 1916.

(Maximum limit, 25 pages.)

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BOMBAY BRANCH
OF THE
Royal Asiatic Society.

ANNUAL SANITARY REPORT FOR 1916.

SECTIONS I to IV.—No remarks.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

Throughout this report figures for population are those taken at the last census in March 1911.

2. During the year, among 30,192 Europeans 324 births and 284 deaths were recorded against 323 and 200 in 1915; the calculated birth-rate was 10·73 *per mille* against 10·66 in 1915 and the death-rate 9·41 against 6·62. One hundred and sixty-four male and 160 female births were recorded against 157 and 166 in 1915, while 185 male and 99 female deaths were recorded against 127 and 73 in 1915.

Europeans.

3. In a population of 8,902, 210 births were registered against 198 in 1915, and 161 deaths against 138; the birth-rate was 23·59 *per mille* against 22·24 in 1915 and the death-rate 18·09 against 15·50.

Anglo-Indians.

Of the births, 111 were males and 99 females against 107 and 91 in 1915; of the deaths 83 were males and 78 females against 76 and 62 in 1915.

4. The population including Sind was, in 1911, 19,587,383. There are now, including Bombay City, 27 Collectorates comprising 248 rural (taluka or mahal), 104 town and 8 cantonment registration circles; in addition, statistical returns are received from 7 cantonments in quasi-Native States.

Indian population.

The population of the rural circles was, in 1911, 16,407,762; of the town circles 3,106,656; of the cantonments in British territory 72,965; and of the cantonments in quasi-Native States 100,089 persons.

5. Seven hundred and four thousand six hundred and seventy-two births were registered, showing a decrease of 22,108 from the figure for 1915 and an increase of 26,847 over that for the decennial mean. The number of births recorded annually since 1906 is given below:—

Births.

1906 ...	... 625,486	1912 ...	... 684,890
1907 ...	... 610,533	1913 ...	... 684,803
1908 ...	... 660,201	1914 ...	... 733,076
1909 ...	... 657,685	1915 ...	... 726,780
1910 ...	... 689,701	1916 ...	... 704,672
1911 ...	... 705,090		

6. The birth-rate for the year was 35·98 and is compared below with the rates recorded in other parts of India:—

Bengal ...	... 31·89	Bihar and Orissa ...	... 36·6
Madras ...	... 32·54	United Provinces ...	... 43·09
Assam ...	... 30·52	Punjab ...	... 45·59
Burma ...	... 33·71	Central Provinces ...	... 43·85

If Sind and Bombay City be excluded the birth-rate for the Presidency was 39·86 against 41·37 in 1915. As usual a wide divergence between the birth-rate for rural areas (40·90) and that for urban areas (32·17) has to be recorded.

7. Over rural areas the variation in birth-rates was from 57·35 for Nandurbar taluka in West Khandesh district to 24·43 for Salsette taluka in Thana district. Of the 187 talukas, pethas and mahals, 34, or 18·2 per cent., returned birth-rates under 35 per 1,000. Of these, 10 (Mandangad, Rajapur, Deogad, Khed, Ratnagiri, Sangameshvar, Guhagar, Chiplun, Malvan and Dapoli) were in Ratnagiri district; 9 (Bhatkal, Kumta, Siddapur, Ankola,

Birth-rate for rural areas in Presidency.

Karwar, Supa, Sirsi, Yellapur and Mundgod) in Kanara district; 6 (Murbad, Kalyan, Shahapur, Bhiwandi, Bassein and Salsette) in Thana district; 3 (Panvel, Mahad and Karjat) in Kolaba district; 2 (Haveli and Maval) in Poona district; 2 (Karad and Malcolmpeth) in Satara district; 1 (Sampgaon) in Belgaum district; and 1 (Kalghatgi) in Dharwar district.

The low birth-rate area is situated very largely in the Konkan, where the population tends to be scattered in small hamlets over wide areas, and registration is difficult.

Birth-rate for urban areas in Presidency.

8. Out of 85 towns, 24 against 22 in 1915 returned birth-rates of over 40, viz., Ranebennur (56·35), Dohad (55·36), Dhandhuka (52·74), Borsad (52·45), Dholka (51·12), Umreth (49·23), Gokak (48·66), Kapadvanj (48·53), Jambusar (48·27), Ahmedabad (46·98), Gadag-Bettigeri (46·83), Erandol (46·03), Sholapur (44·53), Gokarn (43·74), Nadiad (43·58), Barsi (43·52), Kaira (43·31), Nasirabad (43·26), Broach (43·13), Mehmedabad (42·50), Viramgam (42·47), Parola (40·63), Jalgaon (40·42) and Ankleshwar (40·37).

Further improvement is noticed in the cases of Ahmedabad and Surat. The birth-rate for Ahmedabad has risen from 42·31 to 46·98; that for Surat from 24·61 to 31·12. In Broach City there was a steady rise in the birth-rate between 1910 and 1915, but in the year under report there was a marked jump—from 36·08 to 43·13.

In Ahmedabad the birth-rate has been doubled since 1912; in Surat it has been nearly trebled since 1914. This is evidence of the benefit resulting from the appointment of Municipal Commissioners and Health Officers.

For 41 towns, or 48·23 per cent. against 18·2 per cent. for rural areas, the recorded birth-rates were less than 35 per 1,000; for 12 towns against 7 in 1915 the recorded birth-rates were less than 20, viz., Manmad (19·72), Ratnagiri (18·71), Khed (18·49), Wai (18·27), Uran (18·17), Karad (17·90), Kurla (17·04), Igatpuri (16·11), Lonavla (15·70), Kalyan (14·84), Junnar (11·11) and Poona City (6·94).

In all these towns municipalities are responsible for the public health, and the figures show that sufficient attention is not given to registration. In the case of Poona City plague may explain some omissions, but it does not account for a consistently low birth-rate in a prosperous city. Defective birth registration is evidenced by the fact that whereas only 876 births were recorded, 1,288 deaths in infants under 1 year were registered. It is to be regretted that no action has been taken to improve matters although frequent attention has been drawn to the necessity.

Birth-rate—Bombay City.

9. In Bombay City, 20,848 births were registered against 19,732 in the previous year, the birth-rate being 21·65 against 20·48 in the previous year.

Birth-rate—Sind.

10. In Sind the birth-rate was 23·14 against 23·29 in 1915. It is again noted that the birth-rate for urban areas (37·54) was much in excess of that for rural areas (21·18). Rural registration in Sind is worked under great difficulties, and very little improvement will be possible until sub-registrars for each village can be appointed.

Of 19 urban circles, three—Karachi (49·68), Larkana (44·87) and Rohri (41·44)—returned birth-rates of over 40; four—Sukkur (39·21), Ratodero (38·63), Kambar (36·27) and Sehwan (35·38)—between 35 and 40; and three—Shikarpur (33·52), Tatta (32·61) and Garhiyasin (31·15)—between 30 and 35.

Birth-rate—Cantonments.

11. The birth-rates for Deolali and Ahmednagar cantonments were 24·59 and 21·17 respectively, while for the remaining cantonments it was below 20, varying between 19·29 for Kirkee cantonment and 7·53 for Belgaum.

Births by sexes.

12. Out of 704,672 recorded births, 365,057 were males and 339,615 were females. The ratio of male to female births was as 107·49 to 100. The corresponding figure for males last year was 107·74. The proportion of male to female births registered varied from 101·81 in Thana district to 142·15 in Hyderabad district.

Still births.

13. Ten thousand nine hundred and forty still births, or 1·55 per cent. of the total live births, were registered. The corresponding figures for 1915 were 10,764 and 1·48 per cent.

The percentage of still to live births varied from ·09 for Ahmednagar district to 8·32 for the city of Bombay. It is difficult to make comparisons, for, it is certain that in many villages still births are not recorded. In Belgaum (2·44), Dharwar (4·22), Bijapur (2·88) and Kanara (5·54) the percentages of still to live births are high as compared with the remainder of the Presidency. In Dharwar and Kanara the high rates indicate the existence of a factor or factors influencing adversely the vitality of mothers: probably malaria is predominant.

Deaths.

14. Six hundred and fifty-two thousand five hundred and eighty-five deaths were registered against 511,613 in 1915. Of the total deaths registered, 335,545 occurred among males and 317,040 among females against 263,672 and 247,941 in 1915.

The number of deaths recorded in each year since 1906 is given below :—

1906	...	648,019	1912	...	683,210
1907	...	606,606	1913	...	521,539
1908	...	501,838	1914	...	577,504
1909	...	505,936	1915	...	511,613
1910	...	560,003	1916	...	652,585
1911	...	555,312			

15. The recorded death-rate was 33·32 against 26·12 in 1915 and a decennial mean of 29·82.

The death-rates recorded in other parts of India are given :—

Madras ...	21·87	Bihar and Orissa...	32·8
Bengal ...	27·37	Punjab ...	30·70
Assam ...	28·59	United Provinces	29·50
Burma ...	23·97	Central Provinces	39·95

Death-rate for Presidency.

16. Excluding Bombay City and Sind the death-rate for the Presidency was 35·82 against 28·13 in 1915. The death-rates for rural and urban areas were 34·75 and 43·71 against 27·56 and 32·36 in 1915 respectively.

For districts the highest death-rate (53·39) was recorded in Sholapur and the lowest (24·52) in Panch Mahals.

17. Of the 187 talukas, pethas and mahals, 13 returned death-rates above 50, viz., Madha (70·70), Pathardi (58·28), Jamkhed (58·20), Nandgaon (56·21), Sindgi (55·96), Ahmednagar (54·73), Sindkheda (52·45), Shahada (52·18), Shrigonda (51·67), Pandharpur (51·38), Barsi (51·32), Dhond (51·25) and Karmala (50·73); 24 returned rates above 40, viz., Bhusaval, Edlabad and Jamner in East Khandesh; Sakri and Nandurbar in West Khandesh; Malegaon and Baglan in Nasik; Newasa and Shevgaon in Ahmednagar; Indapur and Haveli in Poona; Sholapur and Sangola in Sholapur; Khandala, Karad, Shirala, Man and Koregaon in Satara; Sampgaon in Belgaum; Bankapur, Kalghatgi and Hangal in Dharwar; and Bagevadi and Bijapur in Bijapur.

18. For urban areas death-rates varied between 119·08 for Malegaon and 11·31 for Uran. Out of 85 urban registration areas, 28 against 10 in 1915 returned death-rates over 40, viz., Malegaon (119·08), Sholapur (89·92), Poona (67·20), Ahmednagar (65·88), Barsi (63·87), Nadiad (63·36), Nandurbar (61·57), Yeola (61·06), Ahmedabad (56·82), Dohad (54·39), Dharwar (53·90), Mehmedabad (52·76), Pandharpur (52·50), Borsad (51·85), Dholka (51·49), Umreth (49·15), Viramgam (48·91), Dakore (48·30), Kaira (47·96), Manmad (45·49), Gokak (44·50), Anand (44·48), Alibag (44·07), Ranebennur (43·55), Hubli (42·29), Gokarn (42·23), Bagalkot (40·99) and Kapadvanj (40·68).

These high urban death-rates reveal a serious state of affairs—a general state of sanitary unpreparedness in the large municipal towns, which leads to unnecessary sickness and loss of life in epidemic years. Plague in 1916 was not the only factor contributing to this high urban mortality. Twelve out of 20 urban areas in Gujarat are included in the above list, and plague was only reported from 3 out

of the 12 and the mortality from plague in all three was low. The main causes of the urban mortality in Gujarat were cholera, bowel complaints and fevers. The probable connection between bowel complaints and fevers was mentioned in last year's report.

Out of 10 urban registration areas in the districts of Poona, Sholapur and Ahmednagar, 5 are included in the above list. In all 5 towns plague contributed largely to the mortality, and was mainly responsible in Poona, Ahmednagar and Barsi towns, which returned death-rates from plague of 30·32, 35·89 and 24·48 respectively. In Sholapur the plague epidemic was very severe, giving rise to a mortality of 37·03, but bowel complaints added to the unhealthiness. Cholera, bowel complaints and plague were equally responsible for the high death-rate in Pandharpur. In Nasik district, 3 out of the 6 urban areas returned death-rates of over 40, and one—Malegaon—headed the list with an appalling death-rate of 119·08. Cholera, bowel complaints, plague and small-pox were all epidemic. The high mortality in Yeola was very largely from plague which caused a death-rate of 31·41: while in Manmad plague and cholera were both epidemic. Nandurbar in West Khandesh was visited by severe epidemic of plague, and Alibag in Kolaba suffered from plague, cholera and bowel complaints.

Three out of the four urban registration areas in Dharwar district returned high death-rates and in Dharwar and Hubli towns the chief cause was plague. In Ranebennur "other causes" contributed mainly to the high death-rate, and of these phthisis was one of the most important.

In Gokak and Bagalkot in the Belgaum and Bijapur districts respectively cholera, bowel complaints and plague were all prevalent.

In Gokarn of the Kanara district small-pox was epidemic.

It is unsatisfactory to note that in the list of towns with high mortality are included four—Pandharpur, Dakore, Manmad and Gokarn—which are intimately connected with the pilgrim traffic, and indicate the danger of this traffic to the general health of the Presidency.

Little improvement in the general public health can be expected until the sanitary administration of the larger towns is placed on a better footing. The excuse given for stagnation is invariably lack of funds. The chief need, however, is the development of a sanitary conscience, for, when the general public realises the necessity for sanitary reform money will be found.

Corrected death-rates.

19. The following table gives death-rates corrected in accordance with age and sex distribution for the few towns for which such correction is possible:—

	Standard death-rate.	Factor for correction.	Recorded death-rate, 1916.	Corrected death-rate.
Presidency	37·7	1·	35·82	35·82
Bombay City	31·2	1·21	30·79	37·25
Ahmedabad	36·3	1·03	56·82	58·52
Karachi	35·6	1·06	49·21	52·16
Surat	36·6	1·03	36·83	37·93
Poona	36·5	1·03	67·20	69·21
Sholapur	36·3	1·03	89·92	92·61

Mortality in Bombay City.

20. The uncorrected death-rate for Bombay City was 30·79 against a decennial mean of 38·58. This fall in mortality is encouraging for other municipalities. Much of the reduction is due to measures against plague, for the plague mortality in 1916 was 2·06 against a decennial mean of 4·79. The comparatively high proportion of male adults in the population of Bombay City is naturally favourable to a low mortality from general causes, but is an adverse factor as regards plague. The continued reduction in the intensity of plague is all the more satisfactory.

Ahmedabad City.

21. The death-rate rose to 56·82. The most marked feature is a jump in the mortality from respiratory diseases from 2,530 in 1915 to 4,695 in 1916, and a fall in the mortality from fevers from 4,152 in 1915 to 1,392 in 1916. The report of the City Health Officer has not yet been received, and comment is at present impossible, beyond the broad statement of the possibility of improvement in the registration of the causes of deaths due to the appointment of Sub-Assistant Surgeons to make investigations. Cholera and dysentery caused a high mortality during the monsoon, while small-pox and plague were to a slight extent epidemic.

Death-rate in Sind.

22. The death-rate for Sind was 23·23 against 18·00 in the previous year. The variation between the rate for urban areas (40·01) and that for rural areas (20·93) is very marked. The urban death-rates range between 18·79 for Halla and 66·41 for Umarkot.

Death-rate in cantonments.

23. The lowest death-rate (17·99) was recorded in Karachi and the highest (65·57) in Ahmednagar cantonment. Ahmednagar suffered very severely from plague.

Natural increase or decrease in population.

24. Over the Presidency as a whole the births exceeded the deaths by 52,087. Figures for districts are given in columns 6 and 9, Annual Form II, and the following table gives the natural increase or decrease in population for the principal registration areas :—

	Excess of births over deaths.	Percentage increase on population, 1911.	Excess of deaths over births.	Percentage decrease.
Presidency excluding Sind and Bombay City ...	61,219	0·40	.....	.....
Sind ...	.....	.....	286	0·01
Bombay City ...	.....	.....	8,816	0·91

Deaths by ages and sexes.

25. Three hundred and thirty-five thousand five hundred and forty-five male and 317,040 female deaths were recorded, giving death-rates of 32·93 and 33·73 respectively against 25·88 and 26·38 for 1915. For every 100 females 105·84 males died. The corresponding figure for 1915 was 106·34. In Sind the ratio of male to female deaths was as 115·94 to 100.

Infant mortality.

26. The mortality of infants based on the number of registered births was 199·57 per 1,000 against 172 during the previous year. The male and female rates were 206·34 and 192·29 respectively as compared with 178·92 and 164·55 in the previous year.

Infantile deaths formed 21·58 per cent. of the total deaths against 24·43 in 1915. The comparatively low percentage is due to the high incidence of plague, a disease to which infants are much less susceptible than are adults.

The following is a short extract from the report of the Executive Health Officer, Bombay Municipality :—

"*Infant Mortality.*—The total mortality among infants or children upto one year of age during the year under notice was 8,215. It was 1,613 more than in 1915 (6,602) but 309 less than the average of the preceding quinquennium (1912-1916).

"The percentage of infant mortality to the total mortality at all ages during the year was 26·86 against 27·87 in 1915. The ratio per 1,000 of births registered was 387·86. This was higher than in the three years immediately preceding (329·2 in 1915, 385·1 in 1914 and 381·1 in 1913) or in 1911 (378·8) but lower than in any other previous year.

"Infant mortality has been calculated above on the actual number of births registered; but for a correct estimate, it has to be calculated on the corrected number of births, so as to include infants who died during the year without their births being registered. The corrected number of births, as we have seen above, works out to 29,499 and therefore gives an infant mortality equal to the ratio of 278·48 per 1,000 against 235·4 in 1915 and 277·05 in 1914.

"*Infant mortality from principal causes.*—It will be observed from the following Table that Debility and the diseases of the Nervous and Respiratory systems were

responsible in the aggregate for over 73 per cent. (6,025) deaths of the total infant mortality (8,215) against nearly 75 per cent. in 1915 and about 77 per cent. in 1914.

Infant mortality from Principal Causes from 1910 to 1916.

Cause of Death.	1910.	1911.	1912.	1913.	1914.	1915.	Average 1911 to 1915.	1916.	Increase or Decrease.
Small-pox ...	264	98	274	55	60	64	110	259	+149
Measles ...	56	233	82	66	82	104	113	134	+21
All fevers ...	238	251	277	201	163	226	223	229	+6
Diarrhœa and Dysentery ...	674	581	900	615	579	670	659	481	—178
Premature birth ...	147	175	219	181	187	182	179	357	+178
Debility ...	2,567	2,364	2,581	2,207	2,187	2,381	2,344	2,165	—179
Diseases of the nervous system .	1,402	1,400	1,570	1,278	1,271	1,384	1,380	1,317	—63
Do. Respiratory system	2,292	2,364	2,877	2,113	2,425	2,414	2,438	2,543	+105
All causes ...	8,253	8,120	9,646	7,488	7,580	6,602	8,210	8,215	+5

"Generally speaking these are a group of causes which have reference to the social environment and economic condition of the parents, as regards the home and its surroundings, occupation of mothers entailing hard work, their habits and poverty, all of which affect the mother during pregnancy and influence the health of the child before and after birth, and aided by the unhygienic conditions in which a large proportion of the infants are born, to swell the number of those who come into the world only to die.

"Compared with the averages of the preceding five years, an appreciable reduction in infant mortality was in evidence under the following causes: Diarrhœa and Dysentery (— 178); Debility (— 179) and diseases of the Nervous system (— 63). The mortality from small-pox (259) was 195 higher than in 1915 and 149 more than the quinquennial mean.

"The mortality among children born prematurely (357) was higher than in 1915 (182) and exceeded the last quinquennial average by (178).

"*Infant mortality by age-periods.*—The following table classifies the mortality from Principal Causes among infants arranged under the three age-periods of 1—30 days, 1—6 months and 7—12 months during 1916; the corresponding figures for 1915 have been inserted for comparison.

Table of deaths among Infants from Principal Causes by age-periods in 1916—1915.

Age-period.	Year.	Small-pox.	Measles.	Malaria.	Ague and Remittent fever.	Diarrhœa and Dysentery.	Premature birth.	Debility.	Nervous system.	Respiratory system.	All Causes.	Percentage of deaths in each age-period to total deaths under 1 year of age.
1 to 30 days ...	1916	10	6	1	6	22	353	1,984	277	83	2,831	34·46
	1915	2	...	...	17	21	207	1768	276	63	2,417	36·61
1 to 6 months ...	1916	118	39	2	87	150	4	157	727	1,111	2,575	31·34
	1915	30	8	3	59	146	4	212	530	857	1,990	30·34
7 to 12 months ...	1916	131	89	7	126	309	...	24	313	1,349	2,809	34·19
	1915	32	26	4	86	334	1	22	200	1,086	2,195	33·34
Total ...	1916	259	134	10	219	481	357	2,165	1,317	2,543	8,215	...
	1915	64	34	7	162	501	212	2,002	1,006	2,006	6,602	...

"It will be observed that of the total mortality under 1 year of age, more than 34 per cent., occurred in the first month of life, and, further, that of the deaths at this early period of life, nearly three-fourths are due to debility; and in the second and third groups the highest proportion of deaths is associated with Diseases of the Respiratory system. The next most fatal cause is the diseases of the Nervous system in the first and second groups and diarrhœa and dysentery in the third, all of which denote exposure and defective feeding.

"Among Hindus of all castes together and Musalmans, who together form the bulk of the City's population, the ratios stand as under:—

	1915.	1916.	Increase or Decrease.
Hindus	350·9	420·36	+ 70·27
Musalmans	335·61	403·21	+ 67·60

"*Infant mortality by the number of rooms occupied.*—The following table classifies births by the number of tenements occupied by the parents as also the number of deaths that occurred among these infants :—

Births and Infant mortality by the number of rooms occupied in 1916.

	1 room and under.	2 rooms.	3 rooms.	4 or more rooms.	Road side.	Hospitals.	Total number in 1916.
Births	14,320	2,693	817	743	59	2,548	21,180
Infant mortality	6,508	1,007	188	177	101	234	8,215
Infant mortality per 100 births registered in the tenements ...	45·44	37·39	23·01	23·82	171·18	9·18	38·78

"It will be observed from the foregoing statement that of the 21,180 live births registered during the year, 14,320 or 67·6 per cent. occurred in tenements of one room or less and the number of deaths among such was 6,508 or 45·4 per cent. of the births ; this proportion varies inversely as the number of rooms occupied ; 37·3 per cent. in the case of two-room tenements, and 23 per cent. in the case of three-room tenements. The lowest percentage of infant mortality (9·18) occurred among children born in Hospitals : these figures cannot however be compared with those of 1915 which were for three months only.

"The Municipal Nurses and the Health Visitors of the Sanitary Association and the Lady Willingdon Scheme—who are all qualified Midwives—daily visit the localities and chawls inhabited by the poor and help to diffuse and popularize elementary knowledge of the principles of health and hygiene and carry such knowledge and habit into the homes and lives of the ignorant, give advice on the prevention of disease and the care and upbringing of infants and bring to the notice of the authorities, un-registered births and un-vaccinated children, and cases of sickness ; they also find out prospective mothers among the poor and induce them to go to the Maternity Homes provided for them free ; and where such recourse is not sought, attend on the women in their homes, providing them with necessaries in the shape of milk, blanket, charpoy, etc. There are at present three Maternity Homes for the poor—one Municipal, at Bellasis Road, and two under the Lady Willingdon Scheme, of which one is at Parel (opened on 24th March 1916) and the other at Victoria Bundar, Colaba (opened on 1st September 1916).

"The visits of the Nurses and Health Visitors are frequently the means of bringing to the Municipal Dispensaries the suffering poor, who would otherwise either not know of the existence of facilities provided or knowing would through carelessness neglect to benefit by them. These visits are therefore doing much good and are not only welcomed and appreciated but in many cases are anxiously sought after. During 1916 the Health Visitors made in all 24,550 visits to houses and chawls and reported 1,181 houses to the Health Department for their insanitary condition, 36 houses for limewashing and 32 premises for overcrowding ; brought 2,121 patients to the Dispensaries and reported 2,535 children for vaccination.

"As to the Municipal Nurses and Midwives, who are ten in number working under the ten District Registrars, they paid during the year 32,111 visits to houses, chawls and huts (against 28,276 in 1915), enquired into 3,360 cases of ordinary sickness, reported 576 cases of infectious diseases, and 1,542 deaths among the female population of the City. They also attended 1,354 confinements (against 1,425 in 1915) and ascertained 10,064 births.

"The very striking decrease in the proportion of births wholly unattended may be considered gratifying ; it is equal to 1·4 below the figure for 1915 and 13·1 since 1909.

"But the percentage of confinements attended by unskilled women was 61·1 as in the previous year.

"The percentage of confinements attended by Qualified Nurses (including Municipal) was (14·5) lower than in 1915 (15·9), but higher than in any other previous year ; so also the percentage of confinements attended by Municipal Nurses. The proportion of births occurring in Hospitals was the highest during the year (19·3), showing an increase of 2·7 over 1915 and 4·9 since 1909. This increase may be explained by the growing number of Lying-in-Hospitals in the City—the Lady Willingdon Scheme having added two in the course of the year (March and September)."

As infant mortality comprises $\frac{1}{5}$th to $\frac{1}{4}$th of the total mortality—a study of the factors influencing it should result in the formulation of measures for its reduction, with marked benefit to the general health of the community. Some light on the subject is thrown by a study of the age at which infants die : thus a high percentage of deaths in infants under one month may indicate low vitality of the infant, or unsatisfactory conditions attending child-birth.

A high rate for infants of over 6 months may indicate faulty surroundings, bad feeding and dirty water; all of which influence adversely health at every age-period. The following table gives the percentages of deaths occurring at different periods during the first year of life for Bombay City and for the 4 districts in the Southern Registration District:—

District.	Under 1 month.	Between 1 and 6 months.	Between 6 and 12 months.
Belgaum	45·10	29·19	25·71
Dhárwár	45·41	31·03	23·56
Bijápur	44·76	29·29	25·95
Kánara	61·43	22·02	16·55
Bombay City	34·46	31·34	34·19

The difference between Bombay City and 4 districts in the percentage of infants dying within 30 days of birth is striking. Part of the excess in all the districts and in Kánara especially is due to malaria, but some is due to unskilled attention on the mothers before, during and after confinement. Great strides in the direction of better attendance have been made in Bombay City during recent years. The need for similar work in the mofussil is indicated by the fact that in Poona City during 1916, 117 deaths of parturient women were registered. Unfortunately the percentage of mortality among women after child-birth cannot be calculated, for, owing to defective registration, only 786 births were registered. Poona contained in 1911 37,789 women between the ages of 15 and 45. Over 3 per 1,000 of these died in 1916 during child-birth, and it must be remembered that among the poorer classes the death of the mother is often followed by the death of the infant. Skilled attention on women and better surroundings for the mother and infant will not be realised without the expenditure of time and trouble on the part of educated Indians. Workers on these lines can be stimulated by the knowledge that their efforts will be rewarded by the saving of many valuable lives.

The infant mortality rate (calculated on the number of registered births) in Bombay City was 387 per 1,000 live births and in Ahmedabad 353. These appalling figures show the need for action.

Deaths by Castes or classes.

27. The deaths by classes in each Collectorate are recorded in Annual Form V, Appendix IV.

28. The subjoined table shows the number of deaths in 1916 arranged according to causes and contrasted with the results for 1915, and with the mean of preceding five years:—

	Mean for 5 years 1911-1915.		1916.		1915.	
	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
Cholera	18,722	·96	19,841	1·01	377	·02
Small-pox	5,305	·27	3,289	·17	1,425	·07
Plague	43,711	2·23	79,507	4·06	43,824	2·24
Fever	247,926	12·66	262,401	13·40	224,797	11·48
Dysentery and Diarrhœa ...	39,455	2·01	34,187	1·75	31,707	1·62
Respiratory diseases ...	62,181	3·17	79,882	4·08	63,364	3·23
Injuries	7,624	·39	8,096	·41	8,113	·41
Other causes	144,911	7·40	165,382	8·44	138,006	7·05
All causes	569,835	29·09	652,585	33·32	511,613	26·12

For comments on the causes of deaths, *vide* Section VI.

Cantonments in *quasi*-Native States.

29. The total number of births registered in those Cantonments which are situated in *quasi*-Native States during the year 1916 was 2,036 against 2,117 in 1915; the birth-rate being 20·34 per mille as against 21·15 in 1915.

There were 3,415 deaths giving a ratio of 34·12 per mille against 3,690 and a ratio of 36·86 in 1915. The statistics are tabulated below :—

Statement showing the names of Cantonments with Population and Deaths from diseases for the year 1916.

Cantonments.	Population according to census of 1911.	Area in square miles.	Average population per square mile.	Number of births.	Ratio of births per 1,000 of population.	Number of deaths from									Ratio of deaths per 1,000 of population.								
						Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.	Injuries.	Other causes.	All causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.	Injuries.	Other causes.	All causes.
Aden { Municipal limits	40,684	6⅔	602	747	18·36	...	1	...	214	661	...	20	714	1,610	...	·02	...	5·26	16·25	...	·49	17·55	39·57
Aden { Purely civil population of Cantonment	307	7/8	42	10	32.57	...	...	...	20	1	...	...	12	33	...	...	...	65·15	3·26	...	...	39·09	107·49
Baroda ...	3,478	1	3,478	57	16·39	9	1	....	20	3	...	...	26	59	2·59	·29	...	5·75	·86	...	...	7·48	16·97
Deesa ...	7,129	5	1,425·8	126	17·67	...	6	...	74	28	4	1	46	159	...	·84	...	10·38	3·93	·56	·14	6·45	22·30
Mhow ...	22,360	6·5	3,440·	198	8·85	6	...	51	178	...	...	...	282	517	·27	...	2·28	7·96	...	...	...	12·61	23·12
Nasirabad ...	16,144	8·58	1,881	625	38·71	9	...	...	309	...	...	7	427	752	·56	...	...	19·14	...	...	·43	26·45	46·58
Neemuch ...	9,786	4·52	2,165	266	27·18	12	...	...	78	....	...	...	193	283	1·23	...	...	7·97	...	...	...	19·72	28·92
Rajkot ...	201	·56	359	7	34·82	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	9·95	9·95
Total ...	100,089	100·87	992	2,036	20·34	36	8	51	893	693	4	28	1,702	3,415	·36	·08	·51	8·92	6·92	·04	·28	17·00	34·12

Rainfall.

30. The rainfall for the year was well above the average except in parts of Northern Gujarát. The most important feature from the standpoint of public health was the heavy precipitation in October and November in the Konkan and Southern Marátha districts. Much damage was done to standing crops, and in parts of Bijápur and Dhárwár Districts to house property. The combination of distress and excess water suggested the probability of a high incidence for malaria, and suggestions for anticipatory measures were made.

Price of grain.

31. The prices of food-grains were higher than the average throughout the year in all districts of the Presidency. The quantity purchasable per rupee varied from 11 per cent. below normal for Sátára District to 47 per cent. for Kolába District.

In Gujarát the prices were high at the beginning of the year and showed a tendency to fall. In the Deccan there was little variation of grain prices during the year.

In Karáchi District the quantity of Jowári purchasable per rupee was 10 per cent. above normal : in the remaining districts of Sind the prices of the staple food-grains were over 30 per cent. below normal.

SECTION VI.

HISTORY OF CHIEF DISEASES.

Cholera.

32. Nineteen thousand eight hundred and forty-one deaths were recorded against 377 in 1915 and a quinquennial mean of 18,722. The mortality for each year since 1897 is given in the following table :—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1897 ...	57,109	1902 ...	3,229	1907 ...	7,656	1912 ...	64,505
1898 ...	4,368	1903 ...	1,825	1908 ...	1,759	1913 ...	5,134
1899 ...	8,579	1904 ...	13,156	1909 ...	28,714	1914 ...	17,779
1900 ...	163,889	1905 ...	5,396	1910 ...	3,694	1915 ...	377
1901 ...	13,600	1906 ...	46,119	1911 ...	5,817	1916 ...	19,841

33. *Distribution.—Vide* Annual Form No. VII. In the Presidency all the districts, with the exception of Kanara, were infected, while in Sind 5 out of the 7 districts reported deaths. Eight of the 20 districts in the Presidency returned death-rates of over 1 per mille of population and in 4 others the death-rate was between 0·75 and 1. The epidemic was widespread. In Sind in only one district—Karachi—was a death-rate of over 1 (1·57) recorded. In the Presidency 9 per cent. and in Sind 3 per cent. of the villages were infected. The epidemic was chiefly felt in the Presidency in the districts of Belgaum, Sholapur, Nasik, Ahmednagar, East Khandesh, West Khandesh and Kaira : the percentage of villages infected varied from 11 for Belgaum upto over 27 for Kaira ; and in Sind in the district of Karachi in which 13 per cent. of the villages were infected.

34. *Course of the epidemic.*—It will be remembered that at the end of 1915 cholera was brought from the Central Provinces into East Khandesh by a railway guard ; this seemingly trifling incident has been indirectly responsible for the mortality in the Presidency during 1916. The outbreak in East Khandesh was at first not virulent. In April Pimpalner was infected, and pilgrims from Pimpalner attended a fair held at Wani. No cases were actually reported from Wani itself, but four inhabitants of Nasik, who attended the fair, were attacked on their return from the fair. Bhagur, a trade centre in the neighbourhood of Deolali camp, was infected probably from Nasik ; from Bhagur the infection was carried to Alwand in Igatpuri taluka. From Alwand a woman who had attended the Alwand market carried the infection into Thana district. Form Nasik the Sangamner taluka of Ahmednagar district was infected early in June, and at about the same time the Kopargaon taluka of the same district was infected from H. H. the Nizam's dominions. Thus in June, at the time when 3 *pálkhis* for the Ashadi festival at Pandharpur were due to start from Trimbak in Nasik district and Edlabad in East Khandesh, cholera was prevalent in both Nasik and East Khandesh districts and in the adjoining talukas of Ahmednagar district through which the *pálkhis* would have to march. The freedom of Pandharpur at the time of the big festival was too much to expect, and cholera broke out on the Ekadasi day. The pilgrims left very rapidly and mainly by rail, and were responsible for a wide dissemination of infection. It was possible to trace directly infection to pilgrims in the case of 7 villages in Poona district, 9 in Satara, 2 in Nagar and 5 in Sholapur. The number of villages infected indirectly or secondarily cannot be estimated. The height of the epidemic in the Deccan and Khandesh was reached in August, the month following that in which the Ashadhi festival fell ; after this the fall in the mortality was very rapid.

35. At the end of 1915 warnings were issued as to the probability of cholera in the spring of 1916 in Gujarat. These warnings were heeded and action was taken in several of the districts, but in Kaira district little was done, and the epidemic was widespread. It apparently started in April in two villages—Vadtal and Dabhan—of the Nadiad taluka of Kaira district. Whence the infection came is unknown, but a fair was held in Vadtal in the 2nd week in April and some 4 or 5 thousand pilgrims attended. It is suggestive that pilgrims came from Khandesh and Baroda State where cholera was prevailing

at the time. The epidemic in Vadtal was not serious but Dabhan lost 66 out of its 2,237 inhabitants. From Dabhan, with Nadiad city as the chief connecting link, it is known that 30 towns and villages received infection. Baroda State was responsible for much of the cholera in Gujarat, for it caused the infection of 3 talukas in Kaira, 3 in Surat, 1 in Broach and 1 in Ahmedabad district. Dakore, an important prilgrim centre in Kaira district, was infected towards the end of June, very shortly before the big festival in July. The source of infection is unknown. Very active measures were taken, and fortunately only a few pilgrims attended the fair. In spite of this, 6 towns and villages were infected by returning pilgrims.

Although there is no reliable evidence it is probable that infection was carried from Pandharpur to certain talukas in Belgaum and Bijapur districts. The infection being introduced so late in the year was maintained up to the end of the year.

At the end of 1915 cholera was present in East Khandesh: the cholera history of 1916 is largely due to direct spread from this centre. At the end of 1916 cholera was present in the Sholapur, Bijapur and Belgaum districts. Cholera in 1917 will be influenced by what happens in these areas; the distribution, however, is favourable for dissemination of infection by the fairs held during the spring months at Pandharpur, Shingnapur and Jotiba.

36. Cholera in 1916 followed as usual the lines of human intercourse, and was spread from district to district or centre to centre by pilgrims or by those engaged in trade. Reports dealing with 29 individuals either travelling by trains or connected with the station staff were received from 10 stations on the G. I. P. Railway. These cases were largely, if not wholly, connected with the Pandharpur festivals in July and November.

When the infection of cholera is brought into any area by a traveller either by road or rail, it is important to realize how it is carried from house to house in any particular town or village, and from town to town or village to village in any area. The epidemic of 1916 throws much light on these points. Careful house to house investigations were made of the epidemics affecting the cities of Ahmedabad, Karachi, and the towns and villages of Belapur Budruk, Belapur Khurd, Rahuri, Vambori, Malharwadi and Deolali in Ahmednagar district: of Indapur, Bhigwan and Charoli Budruk in Poona district.

The Ahmedabad epidemic, which was responsible for 354 reported deaths, took place in the monsoon, that is at a time when it is known that the water-supply receives gross pollution. The evidence collected pointed to a "chance" distribution, the medium probably being water: it was impossible, however, definitely to exclude flies. In the case of Karachi city, where the epidemic resulted in 285 deaths, the investigation was very conclusive. Here the general water-supply was grossly contaminated by the unusually heavy rain washing surface impurities from the camps of workmen into the aqueduct, and by workmen actually on construction work in the aqueduct. The connection between these facts and the epidemic was definite. Belapur Budruk, Belapur Khurd and Rahuri are situated on the banks of rivers, and the inhabitants drink either river water or well water. Belapur Budruk is divided by roads into 6 blocks, and the inhabitants of only two blocks situated at some distance from the river use well water. In these two blocks there were only three cases—two in one house and one in another. It was found that the house in which the two cases occurred was supplied with river water, for the servant found it less trouble to fetch water from the river than to draw it from the well. The third case was a pilgrim on return from Pandharpur. These three cases were not responsible for any "contact" cases, and the epidemic was practically limited to the river water blocks. The epidemic in Belapur Khurd stopped as soon as the people took to well water in place of river water. In Rahuri the conditions were very similar to those in Belapur Budruk, and people who consistently used well water escaped infection.

Vambori, Malharwadi and Deolali were the only three villages not on river banks in Rahuri taluka of Ahmednagar to be attacked by cholera. In Vambori there was only one imported case from Pandharpur. In Malharwadi and Deolali the cases were traced to infected wells, and the epidemic is said to have stopped immediately on the disinfection of the wells with permanganate of potash.

In the case of Indapur infection was brought from Pandharpur. There were 13 cases, and all occurred among the drinkers of water from a well to which there was no parapet wall and at the mouth of which people washed themselves and their clothes. Bhigwan is a village situated on a nulla which separates Indapur taluka from Dhond peta. The principal source of supply is from a well, but a portion of the village is supplied from the nulla. Cholera was present in the villages on the banks of the nulla above stream to Bhigwan and cholera was confined to those inhabitants of Bhigwan who used nulla water.

The epidemic in Charoli Budruk is of great interest, for all the inhabitants of the village drink river water, yet one area escaped entirely. There are 4 ghats at which people take water. The 1st is up-stream to the village, and is the ghat from which the people living in the cholera free area drew water. Cholera was epidemic among those taking water from ghats 2, 3 and 4. On the 30th July some Beldars arrived at Charoli and settled in the middle of the village. They brought cholera with them. The soiled clothes were washed at ghat No. 2, and on the following 2 days there were 18 cases among persons who drew water below-stream. Thus in all the epidemics investigated infected water played the principal if not the only part.

In the conveyance of infection from town to town or village to village attention is again drawn to rivers. For example, the Rahuri taluka of Ahmednagar district may be taken. In this taluka there are 3 rivers—the Pravara, the Mula and the Dev. There are 46 towns and villages on the Pravara—of these 41 were infected. On the river Mula there are 15 towns and villages and all were infected. On the Dev 10, all also infected. Thus out of 71 towns and villages situated on the banks of rivers 66 or 93 per cent. were infected. There are 116 towns and villages in the taluka; and 45 are not on the banks of the rivers: 3 or 6 per cent. of these were infected. It is not possible to dogmatize on the method of transmission of infection from river village to river village. It is probable that the inhabitants of these villages are comparatively prosperous, and that there is considerable movement of the population by reason of trade and religious and social observances. Cholera infection is naturally very readily carried from place to place by man, but the possibility of transferrence by river water cannot be excluded, especially when a large town situated up-stream is infected. It is known that cholera-infected clothes, etc., are washed in the river: that people will draw drinking water a few feet below the spot where clothes are being washed: and that the river beds are heavily manured and cultivated during the dry season. Until public opinion is educated up to the point necessary for making such customs impossible, the heavy mortality ascribed to cholera, dysentery and diarrhœa and part of that to fevers will continue.

37. Potassium permanganate treatments were used, but the use was limited because in many cases the treatments were not stocked with village officers. If treatment is to be efficacious it must commence at once. The Deputy Sanitary Commissioner of Gujarat was able to collect details of 445 cases treated in 4 towns: 61 per cent. of these recovered. In the absence of "control" cases no deduction as to the value of the treatment can be made, for, the case mortality of cholera varies in different epidemics. In several areas these treatments have acquired a local reputation, and each village officer in the cholera zone should stock a few treatments.

Dysentery and Diarrhœa.

38. Thirty-four thousand one hundred and eighty-seven deaths, of which 18,045 were males and 16,142 females, were recorded against 31,707 in 1915 and 43,518 the decennial mean. The death-rate was 1·75 against 1·62 in 1915 and a quinquennial mean of 2·01.

The annual number of deaths registered under this head since 1905 is tabulated below:—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1905 ...	55,488	1908 ...	40,781	1911 ...	31,549	1914 ...	42,961
1906 ...	61,736	1909 ...	35,039	1912 ...	57,039	1915 ...	31,707
1907 ...	53,708	1910 ...	46,643	1913 ...	34,021	1916 ...	34,187

39. The urban death-rate was 2·38 and the rural 1·62 against 2·23 and 1·50 in 1915 respectively.

The following table gives the towns in which the death-rate was over 2 per 1,000 and compares the death-rate for the year with the quinquennial mean :—

Town.	Death-rate.	Mean.	Town.	Death-rate.	Mean.
Nasirabad ...	3·99	3·71	Dharwar ...	2·49	2·10
Nandurbar ...	2·79	1·94	Gadag-Betigeri ...	4·96	2·71
Nasik ...	2·89	2·83	Ranebennur ...	2·01	1·63
Yeola ...	2·33	2·37	Bagalkot ...	2·72	3·10
Manmad ...	2·59	2·40	Guledgud ...	2·03	1·59
Deolali cantonment ...	8·01	3·43	Kumta ...	2·13	2·71
Thana ...	2·12	2·41	Gokarn ...	6·22	4·46
Alibag ...	8·04	1·73	Honavar ...	5·05	2·82
Bombay ...	2·39	3·29	Bhatkal ...	2·24	2·57
Ahmednagar ...	2·66	2·20	Surat ...	2·74	1·37
Poona ...	4·88	8·97	Rander ...	2·34	1·62
Baramati ...	5·10	1·97	Jambusar ...	2·78	1·40
Poona cantonment ...	2·32	1·34	Kaira ...	2·19	2·16
Kirkee „ ...	5·99	5·46	Mehmedabad ...	2·69	1·21
Sholapur ...	8·73	12·27	Borsad ...	6·49	3·78
Pandharpur ...	7·39	9·22	Anand ...	2·47	1·71
Satara ...	2·41	6·99	Kapadvanj ...	2·13	2·15
Ratnagiri ...	3·02	3·54	Ahmedabad ...	3·10	1·37
Gokak ...	3·28	4·64	Dhandhuka ...	4·73	1·74
Athni ...	2·46	5·00	Dholka ...	2·12	1·58
Nipani ...	3·25	2·53			

40. The slightly enhanced mortality from these diseases during the year was associated with the increased incidence of cholera. The invariable prevalence of these diseases in the monsoon months is connected with the washing into water supplies of surface impurities. The partial sterilization of the Poona city water-supply was carried out throughout the year. The death-rate was below that for 1915 and very nearly half the quinquennial mean. The system of distribution is very faulty and to some extent vitiates the result of the initial partial sterilization. If a good system of distribution and more perfect sterilization were possible the death-rate in Poona city from these diseases would decline still further. The experience of 1915 held out the hope that the monsoon epidemic in Poona cantonment would not recur. Unfortunately this was not realized, and the opinion was freely expressed that water could have no casual connection with the disease. It must be remembered that the sterilization of the water was very imperfectly done, owing to the dose of the re-agent not being calculated. It was also found that the water issuing from taps differed bacteriologically very considerably from that in the pure water reservoir. The possibility of insuction of an impure subsoil water is being investigated.

Fevers.

41. Two hundred and sixty-two thousand four hundred and one deaths (134,669 males and 127,732 females) were recorded as due to fevers against 224,797 in 1915 and a decennial mean of 250,540. The death-rate was 13·40 against 11·49 in 1915 and a quinquennial mean of 12·66.

The annual mortality attributed to fevers since 1905 is given below:—

Year.	No. of deaths from fever.	Year.	No. of deaths from fever.	Year.	No. of deaths from fever.
1905	245,373	1909	223,888	1913	246,319
1906	274,653	1910	263,528	1914	259,164
1907	260,329	1911	223,027	1915	224,797
1908	243,372	1912	286,321	1916	262,401

It is important to realize how far severe epidemics of plague tend to swell the fever mortality. In 1904, 1905, 1907 and 1911 the plague epidemics were exceptionally severe, and in all these years, with the exception of 1907, the fever mortality was well below the average. In 1906 and 1912 the fever mortality was exceptionally high, and cholera was very widely disseminated. It may be taken as an axiom that in plague years, provided there is no cholera, the fever mortality is below the normal, and in bad cholera years it is invariably much above the normal. It must not be understood from this that plague deaths are not registered as fever deaths: to some extent they are, especially in the early days of an epidemic in a village: nor must it be thought that a large number of cholera deaths are returned as fever deaths. The important fact is that in cholera years factors exist which lead to a very high mortality among children under 5: the most prominent symptom of the disease is fever, and a large percentage of these cases is attributed to fevers. In Sholapur district, where over 53 per cent. of the fever deaths were in children under 5, a proportion of these child fever deaths was due to measles and its sequels.

In Poona district many of the village officers classify fever deaths into "malaria," "9 days' fever" and "20 days' fever." The deaths ascribed to malaria constituted over 27 per cent. of the total fever deaths, and the maximum intensity of fatal malaria, as diagnozed by the village officers, occurred between August and December.

The classification of deaths from fevers by age periods in the following Collectorates is tabulated below:—

	0—5.	5—20.	20—40.	40—60.	Over 60.
Belgaum ...	28·07	22·81	19·70	17·66	11·76
Dharwar ...	25·11	21·83	20·63	19·46	12·97
Bijapur ...	31·18	17·16	15·63	16·99	19·04
Kanara ...	16·11	9·77	22·61	25·31	26·20
Ahmednagar ...	39·56	15·94	15·08	16·04	13·38
Poona ...	46·80	9·96	11·07	8·96	23·21
Sholapur ...	53·80	16·09	10·71	9·51	9·89
Satara ...	42·77	12·95	11·94	12·12	20·22
Ratnagiri ...	22·25	8·30	16·09	20·21	33·15

42. The preventive measures against malaria in the Presidency and Sind were limited practically to the treatment of sufferers with quinine. In the Presidency only one Sub-Assistant Surgeon could be spared for Kaira district, who treated 695 cases of malaria. In Sind 4 Sub-Assistant Surgeons were appointed for Hyderabad, Thar and Parkar, Larkana and Sukkur districts—one for each district. They treated 7,494 cases of malaria and 548 cases of enlarged spleen.

Three thousand six hundred and sixteen pounds of quinine were sold or distributed free in the Presidency and Sind by district local boards, municipalities, and post offices.

In Sind the district local boards sold as treatments 85·5 lbs. and as pills 21·5 lbs.; they distributed free 45·5 lbs. as treatments and 252·5 lbs. as pills. The total sale and free distribution came to 405 lbs. against 604 lbs. in 1915. Sind suffered severely from malaria in 1916 and the reduction in the amount of quinine disposed of is associated with the rise in price of the drug and the present difficulty in making pills and treatments. The post offices of the Karachi and Indus Right Bank and Left Bank Divisions sold 280 lbs. of quinine powders, exceeding the sale of last year by nearly 60 lbs. The total distribution in Sind was 685 lbs. against 825 lbs. in 1915. Six hundred and eighty-five pounds is equivalent to 1·5 grains per head of population. Malaria is practically present throughout Sind. To treat prophylactically the whole population would require 50 to 100 fold the weight of quinine. This is obviously impossible and the prophylactic use of quinine should be confined as far as possible to school children with a view to getting the maximum benefit from the limited available supply.

In the Presidency the district local boards and municipalities disposed of 756 lbs. of quinine—579 lbs. by sale and 177 lbs. by free distribution. In 1915 the corresponding figures were 506 lbs., 227·5 lbs. and 278·5 lbs. In the post offices 2,175 lbs. were sold against 1,654 lbs. in 1915. The most active sales and distributions of quinine by district local boards and municipalities were from Dharwar (260 lbs.), Nasik (119 lbs.), East Khandesh (116 lbs.), Kanara (54 lbs.), Surat (49 lbs.), Broach (32 lbs.), Kaira (29 lbs.), Ahmedabad (25 lbs.) and Kolaba (20 lbs). There was no sale nor distribution by the local bodies of Ahmednagar and Sholapur, and practically none by the Poona local bodies.

The post office sales where highest in the Ahmednagar Division (291 lbs.) and lowest in the Konkan (52 lbs.).

43. Two experiments on a small scale in the quininisation of school children were carried out in the Dharwar district.

Three schools in Hubli city were chosen: in two quinine was given regularly to the children, and in one no quinine was given. Before the experiment the percentage of children found with enlarged spleen in the schools was over 20. In the quininised schools the rate fell to 4 per cent. and in the control school to 16 per cent. The administration commenced on the 16th September and was continued upto 31st January following, with an interval of 15 days in November.

In Bankapur taluka quinine was given to the children attending two small schools for 3 months. A marked reduction in the spleen rate followed, and the condition of the children was improved. No information is available as to the effect of the drug in warding off fever attacks and thereby increasing school attendance.

In Bankapur taluka the children, whose parents could afford it, were charged 8 annas each for the course of treatment. It is hoped that this year a more extensive trial will be given to this method of giving quinine.

44. During the year the Larkana district local board took action with regard to the borrow-pits to which their attention had been drawn by the Deputy Sanitary Commissioner.

The Deputy Sanitary Commissioner, Western Registration District, reported on a large borrow-pit near the police lines at Bhusaval, which is a danger to the whole neighbourhood and borrow-pits near the Arnala Island in Thana district.

The Deputy Sanitary Commissioner, Southern Registration District, drew attention of the District Engineer, M. & S. M. Railway, to a number of borrow-pits in the railway yard at Haveri, but the latter declined to take any action, giving as a reason the existence of a tank within municipal limits.

The Deputy Sanitary Commissioner, Sind Registration District, brought to the notice of the district local boards, Hyderabad, the existence of several borrrow-pits along the local fund road in Badin taluka.

Plague.

45. Seventy-nine thousand five hundred and seven deaths (39,100 males and 40,407 females) were recorded against 43,824 in the previous year and 44,039 the decennial mean.

The annual number of deaths since 1905 is given below:—

Year.	No. of deaths from plague.	Year.	No. of deaths from plague.	Year.	No. of deaths from plague.
1905	71,363	1909	24,319	1913	25,288
1906	51,525	1910	25,043	1914	20,060
1907	93,609	1911	100,399	1915	43,824
1908	27,345	1912	28,984	1916	79,507

46. *Distribution.—Vide* Annual Form No. XII. Two hundred and thirteen registration circles were infected against 209 in 1915. Two thousand six hundred and forty-nine towns and villages or 10 per cent. of the total reported deaths

against 1,536 or nearly 6 per cent. in 1915. The chief force of the epidemic was felt in the districts of Sholapur, Poona, Ahmednagar, Satara, Dharwar, Bijapur, Belgaum, Nasik and West Khandesh, which returned between them 74,483 of the deaths. Two thousand seven hundred and fifty-five of the remainder were registered in the district of Surat and the city of Bombay. The town of Ratnagiri suffered from a severe epidemic, resulting in a death-rate of 10·68 per mille of population. The epidemic originated in the post office, and it is suspected that the infective agent was brought in the parcel post bags: but it is not clear if it came originally from Bombay or Kolhapur. Spread in the Ratnagiri district was limited.

47. In Sholapur district 14,021 deaths were recorded against 7,769 in the previous year. The death-rate was 18·25 against 10·12 in 1915 and a quinquennial mean of 4·03. Two thousand two hundred and sixty deaths were reported from Sholapur city. A serious epidemic in the district was foreshadowed by the number of villages in which infection persisted during the hot weather. Of these "carrying over" villages four were situated in Madha taluka, and one each in Sholapur, Pandharpur, Sangola and Karmala talukas. In Madha taluka 77 out of 89 villages reported cases, and 3,867 deaths were registered.

48. The infection was apparently brought to Sholapur city by a party from the suburbs who went to Belati to attend the funeral of a man who had died from plague. Subsequent to their return there were three fatal human cases, and a rat epizootic started, which spread to neighbouring areas in which mill workers resided. The infection of the mills was mainly responsible for the epidemic in the city proper. The preventive measures adopted were rat destruction, evacuation and inoculation. Rat destruction was ineffective for two reasons: the number of traps was insufficient, about 25 per cent. of the requisite number, and the existence of scruples against the taking of life, notably in one of the most severely infected mills. Evacuation was largely resorted to, but caused much inconvenience owing to lack of arrangements for water, lighting and sanitary conveniences. The Deputy Sanitary Commissioner has selected suitable sites for properly organized camps, and it is hoped that the municipality will put them in order. Two thousand eight hundred and nine inoculations were done: this represents a very small percentage of the population, which was over 60,000 at the time of the last census, and must now be considerably increased.

Taking the district as a whole evacuation and inoculation were the measures relied on. Evacuation if properly controlled will save many lives, but if uncontrolled, as it generally is, that is, if people are allowed to leave an infected village and migrate to uninfected villages, it is a fruitful source of the spread of infection and of increased mortality in other localities.

Outside Sholapur city 4,406 inoculations were performed: of these, 2,094 were done in the towns of Pandharpur and Barsi. Excluding these 3 towns inoculation was done in 45 towns and villages, a very small proportion of the 352 towns and villages infected. Four special inoculators were employed and inoculated between them 2,031 persons. Seventy-three were inoculated by private medical practitioners, and 4,320 by medical officers in charge of dispensaries.

49. In Poona district out of the 10,945 deaths registered 3,825 were in Poona city. The death-rate for the district was 10·28 against a quinquennial mean of 1·63.

At the close of the 1915-16 epidemic infection persisted in Poona city, and in 4 towns and villages—one in each of the talukas of Junnar, Indapur, Purandhar and Ambegaon. Unfortunately the hot weather infection in Poona city was in Nana's peth, the chief granary of the city. This focus was responsible mainly for the virulent epidemic in the city; probably for the infection of Bhopla's chowk, the secondary granary of the cantonment; and for the spread of infection through Haveli taluka, in which during the last half of the year 87 villages were infected with the loss of 2,010 persons.

Poona city has passed through the most severe epidemic it has experienced since 1906: this fact may be wrongly used as an argument in favour of the futility of preventive measures. Prevention must fail if it cannot be applied

to the infected area and in Poona City the only focus of infection which really mattered—the granaries in Nana's peth—was not attacked efficiently owing to the objection of the inhabitants to measures directed against rats.

In Poona City 17,022 inoculations were performed, most of them by private medical practitioners. In Poona and Kirkee Cantonments 19,858 persons were inoculated. Excluding Poona City and the Cantonments there were 13,873 inoculations in the district, and of these 2,609 were by 4 special inoculators in 17 towns and villages.

50. In Ahmednagar District the epidemic was widespread, and resulted in 10,352 deaths of which 1,216 were recorded in Ahmednagar City. The death-rate for the district was 10·97 against a quinquennial mean of 0·63. The infection of Ahmednagar City was carried over from the 1915-16 epidemic. The special plague preventive measures under Major Kunhardt were stopped in March 1916, as it was evident that they had failed to keep infection out of the district. Ahmednagar City was responsible for the direct infection of some 70 towns and villages in the district, and of Sirur town and táluka in the Poona District.

22,703 persons were inoculated in the district and of these 13,919 were residents in Ahmednagar City. Four special inoculators worked in 15 towns and villages and did 6,795 inoculations: 13,885 were done by medical officers in charge of hospitals and dispensaries and 2,023 by private medical practitioners.

51. In Sátára District 8,558 deaths were registered against 3,633 in 1915. The death-rate was 7·92 against a quinquennial mean of 3·00.

During April and May the infection persisted in 12 villages of 6 tálukas. Three of the villages were in Karad and 3 in Shirala peta, 2 in each of Koregaon and Tasgaon Tálukas, and 1 each in Wai and Walwa Tálukas. Karad Táluka and Shirala peta suffered very severely in the latter half of the year, and during this period 27 and 35 fresh villages in these tálukas were infected. 1,636 deaths were reported from Karad Táluka.

52. The campaign against rats by trapping in Sátára City continued throughout the year: 50,441 rats were destroyed against 38,541 in 1915. Up to the end of August the number of traps set daily was in the proportion of 2·8 traps per 100 of population. This figure is, in the light of the experience gained in the Punjab many years ago in connection with the prevention of plague outbreaks by trapping, too low for safety. In September the rate was increased to 4·5 per 100 of population.

Between July 1916 and March 1917, 95 cases of human plague were reported. Sátára City having acquired a reputation for immunity from plague attracted naturally a large number of visitors from plague infected areas, and in the early months of the epidemic many imported cases were discovered. It is probable that the rat epizootic and indigenous human plague started in October. The significance of this work in Sátára will be discussed later; it is clear, however, that Sátára, though an attractive centre for potentially infective persons, suffered from a very mild epidemic. 4,405 persons in the district were inoculated. 3 temporary inoculators were employed and did 1,826 inoculations in 36 towns and villages; the remaining inoculations were done by medical officers in charge of dispensaries and private medical practitioners.

53. Taking these 4 districts as a whole, it is unsatisfactory to note an exceptionally high mortality in comparison with the quinquennial mean. In Sholápur it was 18·25 against 4·03; in Poona 10·28 against 1·63; in Ahmednagar 10·97 against 0·63; and in Sátára 7·92 against 3·00. But for two facts—the commencement of the epidemic in Ahmednagar and Sátára Districts before the cessation of operations, and the continuance of the operations with perhaps even greater attention to detail in the Poona District—it might be thought that the enhanced mortality was in some way connected with the termination of the measures in 3 out of the 4 districts. This conclusion would be just as unjustifiable as one attributing complete failure to the work of the past 3 years. The work has not met with complete success for lack of knowledge concerning the appetite of rats, and the fate of rats subsequent to the laying of baits, and because, unless the carrying over villages throughout the endemic area are

attacked, there is always the possibility of the infection of important grain and trade centres by importation early in the epidemic season from infected areas outside the zone of operations. Experimental work under the auspices of the Indian Research Fund is being carried out, and much light will be thrown on the whole subject of plague prevention. It must be clearly kept in mind that the one sure prevention is the expulsion of rats from the houses of man. Unfortunately there is little hope of this being realised for many years, and in the meantime attention must be directed to the destruction of rats, the protection of grain stores from rats by the building of rat-proof godowns, and the disinfection of grain and articles of merchandise imported from plague infected areas. Rat-proof godowns and disinfection involve expense and possible trouble in connection with trade: these two factors may delay their general adoption, and it is therefore for the time being necessary to direct attention to rat-destruction. Pending the result of the experiments in connection with poison baits, continuous rat-trapping is the measure of value, and the work at Sátára is of great importance. The total expense need not be very great if the measure has not to be applied to every town and village. It is known that plague is carried by man in his movements from place to place. Man's journeys are governed largely by reasons of trade and religious observances. The important trade and religious centres are known: they are not numerous. If it were possible to keep these places free from plague, or even comparatively free as Sátára has been, there can be no doubt that plague mortality would be kept very low. At the present time serviceable rat-traps are kept in 38 municipalities, but only in Sátára is the work organised, and carried out with anything approaching the requisite number of traps. The destruction of rats in religious and trade centres is of such vital importance to the health of the population, that it should be organised and controlled.

54. Dhárwár District.—7,777 deaths were registered against 5,976 in 1915. The death-rate was 7·59 against a quinquennial mean of 10·97. Dhárwár and Hubli cities suffered severely. 39,755 persons were inoculated during the year: of these, 14,360 were done by 5 special inoculators in 71 villages, 22,512 by medical officers in charge of hospitals and dispensaries and 1,924 by private medical practitioners.

55. Belgaum District.—6,170 deaths were recorded against 9,526 in 1915. The death-rate was 6·55 against a quinquennial mean of 6·69. All town and rural circles were infected, but the epidemic was chiefly felt in Belgaum, Athni, Gokak and Nipani town circles; in Belgaum Cantonment and in Parasgad, Sampgaon, Chikodi, Athni and Khanapur rural circles.

16,474 persons were inoculated: of these, 10,661 were done by 4 temporary inoculators in 33 towns and villages and 4,991 by medical officers in charge of hospitals and dispensaries.

56. In Bijápur District the deaths numbered 7,631 against 969 in 1915. The death-rate was 8·84 against a quinquennial mean of 6·57. The epidemic was especially severe in Sindgi, Bagewadi and Bijápur rural circles, and in Bijápur town. Bágalkot town and Indi and Bilgi rural circles suffered less.

25,920 persons were inoculated; and of these, 17,040 were done by 2 special inoculators in 90 villages and 8,278 inoculations were done by medical officers in charge of hospitals and dispensaries.

57. The epidemics in Násik and West Khándesh must be considered together as they are closely connected. In Násik 4,858 deaths weve recorded against 7,139 in 1915—the death-rate was 5·37 against a quinquennial mean of 3·42. In West Khándesh the number of deaths was 4,171 against 4 in 1915. The death-rate was 7·18 as compared with a quinquennial mean of 0·20.

The infection of the 1915-16 epidemic lingered till April in Malegaon town of the Násik District: from Malegaon, Nándgaon was infected. The latter town was evacuated but no effective measures against the rat epizootic were taken. In July when the rains broke the people returned to their houses, and the human epidemic broke out again. Refugees from Nándgaon took the infection to Dondaicha in West Khándesh. Dondaicha is a town with

important trade connections, and from Dondaicha the infection spread rapidly through West Khándesh, and back to Násik District. In Násik District only 4,584 inoculations were done. Four special inoculators were employed, but could do only 813 inoculations in 12 towns and villages. 3,609 persons were inoculated by medical officers in charge of hospitals and dispensaries and 162 by private medical practitioners.

In West Khándesh there were 9,104 inoculations : 5,972 being carried out by medical officers in charge of hospitals and dispensaries. It is perhaps legitimate to wonder how many lives would have been saved by effective rat destruction in the towns of Malegaon, Nándgaon and Dondaicha.

58. 211,960 persons were inoculated against 128,800 in 1915. 24 temporary inoculators were employed during the year for various periods and performed 60,002 operations in 324 towns and villages. In 1915, 285 towns and villages were visited and 44,213 persons were inoculated.

70,611 inoculations were done by medical officers in charge of hospitals and dispensaries ; 23,226 by private medical practitioners ; 5,158 in jails and the remainder by military medical officers. The total cost of the special inoculating staff, inclusive of the cost of the vaccine, came to Rs. 29,019-14-6. The increase in cost is due largely to the enhanced price of the glass phials.

320 deaths among inoculated persons were reported. Of these, 156 occurred within the incubation period of the disease, that is before the immunity given by inoculation had sufficient time to develop.

An idea is abroad that inoculation within the incubation period increases the chance of death, this is not borne out by the figures. The case mortality among uninoculated persons varies in different epidemics, but is always well over 50 per cent. During 1916 among the persons inoculated during the incubation period the case mortality was 53 per cent. ; among those inoculated later it was 34 per cent. Unfortunately at present inoculation is only practised when the epidemic is rife, and not as it should be in anticipation. The value of inoculation as a prevention is evidenced by the immunity of Indian regiments and followers, and of the jail inmates, all of whom are inoculated within a few hours. At Yerávda 1,892 persons were inoculated. There were only 2 plague cases, and one proved fatal. Out of the Indian troops and followers in Poona 4,947 were inoculated, representing almost the whole population. There were 43 attacks from plague. Of these, 10 were among the uninoculated. The case mortality among the inoculated was 30 per cent. and among uninoculated 70 per cent.

A striking instance of the value of rapid inoculation of the whole community is afforded by the Pandita Ramabai's Home for girls at Kedgaon. A fairly severe rat epizootic was discovered one morning : a report reached my office after midday, and nearly all the inmates were inoculated before midday of next day. Many dead rats were found, but in a population of over 1,000, none of whom evacuated, there were only 6 attacks and 2 deaths. The two fatal cases were attacked before inoculation started.

It is perhaps difficult, though not impossible, in a large city to inoculate the whole population within a few days of the commencement of the epidemic : the difficulty lies in the unwillingness of the people, not in the provision of inoculators. Experience this year, as in previous years, has shown how readily medical officers in charge of hospitals and dispensaries, and private medical practitioners have given their services gratuitously in the interests of the people. If the people would come forward the medical profession would respond ; and it would be quite possible, even in a large city as is Poona, to inoculate the whole community within a few days. Until this is done the protection afforded by inoculation will be individual rather than collective.

Small-pox.

59. Three thousand two hundred and eighty-nine deaths were registered against 1,425 in 1915 and a decennial mean of 4,459. The male deaths numbered 1,712 and the female 1,577. The death-rate was 0·17 against 0·07 in 1915 and a quinquennial mean of ·27.

The following table gives the annual mortality from small-pox since 1905:—

Year.	Number of deaths from Small-pox.	Year.	Number of deaths from Small-pox.	Year.	Number of deaths from Small-pox.	Year.	Number of deaths from Small-pox.
1905 ...	16,985	1908 ...	2,526	1911 ...	4,727	1914 ...	4,209
1906 ...	4,063	1909 ...	5,019	1912 ...	6,331	1915 ...	1,425
1907 ...	1,862	1910 ...	4,600	1913 ...	9,833	1916 ...	3,289

60. *Distribution.*—Detailed figures are given in annual form No. VIII. At the end of 1915 infection was present in Bombay City and in the districts of Ratnágiri, Násik, Thána and Kánara. During 1916 the highest death-rates were recorded from Bombay City (1·04) and from the districts of Násik (0·49), Ratnágiri (0·41), Kánara (0·36), and Ahmedabad (0·24). During the year every district in the Presidency reported deaths, and at the end of the year infection persisted in all the districts of Guzerat, and in Ahmednagar, Poona, Sholápur, Násik, Ratnágiri, Kolába and Thána Districts. This wide dissemination of infection indicates an enhanced mortality in 1917.

In Násik District 327 out of the 439 deaths recorded during the year were registered in Malegaon town. A certain section of the inhabitants persistently refuse vaccination: by doing so they are a danger not only to themselves, but to their neighbours.

Bombay City was responsible for the direct infection of 74 towns and villages in the Ratnágiri District. With free human intercourse by reason of labour between Ratnágiri District and Bombay the infective material of any epidemic prevalent is liable to be carried from city to district and *vice versa.*

In Kánara District the chief mortality was in the town of Gokarn, the inhabitants of which oppose vaccination.

61. *Influence of vaccination.*—In these days there is a tendency to decry vaccination, so an effort is being made annually to get reliable figures. In this Presidency there can be no real isolation of cases, so, if it can be shown that one of the two groups (vaccinated and unvaccinated) into which vaccination divides the population suffers less or in a different manner to the other the causal factor must surely be vaccination. One thousand four hundred and eighty-two attacks of small-pox were investigated during the year by officers of the Sanitary Department. Of these, 954 were among the vaccinated, and 528 among the unvaccinated. Of the former, 40 died, giving a case mortality of 4·2 per cent. Of the latter, 123 died, causing a case mortality of 23·3 per cent., over 5 times as great as among the vaccinated.

The average age of vaccinated persons attacked by small-pox was 18 against 8 for unvaccinated persons. The average age of the vaccinated persons fatally attacked was 22 against 4 for unvaccinated persons. These are very important figures and indicate the protection against small-pox afforded in early life by vaccination.

Among the vaccinated less than 1 per cent. of the fatal cases were in infants under one year, while among the unvaccinated the percentage was over 10. It is necessary to explain the fatal incidence of the disease among vaccinated infants. An enquiry proved that the small-pox eruption broke out on the 4th or 5th day after vaccination. The immunity afforded by vaccination may take 14 to 21 days to develop, so these infants were unfortunately not vaccinated in time.

These are simple straightforward and reliable figures. In India small-pox is always with us: in England on the contrary epidemics are of comparatively rare occurrence. There may be some excuse for anti-vaccinists in a town or country in which perfect and expensive systems of isolation have been adopted, and where vaccination of contacts can be enforced: but what can be said for those who, ignorant of or purposely ignoring local conditions, endeavour to poison the minds of the inhabitants of this Presidency against a measure which has during the past 90 years saved countless lives, and has limited

to an appreciable extent the sufferings to which people living under insanitary conditions are liable.

Respiratory Diseases.

62. Seventy-nine thousand eight hundred and eighty-two deaths (42,485 males and 37,397 females) were registered as compared with 63,364 in 1915 and a decennial mean of 59,757.

The annual number of deaths registered since 1905 is given in the following table :—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1905 ...	54,537	1908 ...	54,671	1911 ...	51,470	1914 ...	65,941
1906 ...	60,615	1909 ...	53,433	1912 ...	70,712	1915 ...	63,364
1907 ...	58,068	1910 ...	59,880	1913 ...	59,418	1916 ...	79,882

The death-rate per 1,000 of population was 4·08 against 3·23 in 1915 and 3·17 the mean of previous five years.

63. In rural areas the death-rate was 3·16 against one of 8·83 for urban areas. The highest death-rates for urban areas were recorded in Kaira (22·47), Ahmedabad (21·94), Umarkot (15·96), Broach (15·71), Mirpurkhas (13·79), Surat (13·46), Umreth (13·41), Kapadvanj (13·18), Rander (12·26), Bombay (11·29), Nadiad (11·20), Jambusar (10·90), Viramgam (10·30), Borsad (10·29), Poona (10·05), Ahmednagar (9·33), Hubli (8·92), Yeola (8·91), Anand (8·78), Dhandhuka (8·33) and Hyderabad (8·26).

64. *Phthisis.*—In Gujarat Registration District 3,934 deaths from phthisis were recorded (2,216 males and 1,718 females), the death-rate being 1·40 against 1·14 in 1915. The urban death-rate was 3·28 against one for rural areas of 0·90, as compared with 2·76 and 0·71 respectively in 1915.

The principle urban death-rates are given in the following table :—

Towns.	Total death-rate.	Male death-rate.	Female death-rate.
Ahmedabad	4·85	4·57	5·17
Dhandhuka	2·74	3·42	2·12
Viramgam	3·47	4·15	2·78
Dholka	2·78	2·81	2·74
Kaira	3·29	5·43	1·08
Nadiad	3·09	2·86	3·37
Dakore	1·93	2·35	1·42
Kapadvanj	4·42	5·44	3·49
Broach	2·98	2·52	3·47
Jambusar	1·56	2·19	·90
Surat	2·88	2·31	3·49
Rander	3·46	2·77	4·06

Taking Gujarat as a whole the male exceeded the female death-rate, but the reverse was the case in 5 towns (Ahmedabad, Nadiad, Broach, Surat and Rander) in which 841 female deaths were recorded against 778 male. On analysing these deaths by castes it is found that the excess is in Mohamedan women, of whom 262 died as compared with 156 men. For other castes there were 622 male deaths against 579 females. This indicates the danger attendant on the seclusion of women.

Three thousand four hundred and ninety-one deaths, or nearly 89 per cent., occurred in persons between the ages of 20 and 60, while the population between these ages represents only 52 per cent. of the total population.

65. In the Southern Registration District 1,624 deaths from phthisis were registered against 1,539 in 1915. The death-rate was ·50 against ·47 in 1915. The urban death-rate was 1·24 against one of ·41 for rural areas, as compared with 1·22 and ·39 respectively in 1915.

The highest urban death-rates were recorded in Gokak (4·10), Navalgund (2·84), Gokarn (2·83), Ranebennur (2·38), Belgaum (2·10), Bagalkot (1·33), Ilkal (1·27), Bijapur (1·26), Dharwar (1·26) and Athni (1·16).

Phthisis is a disease of adult-life and associated with imperfect housing. The continued prevalence of phthisis in Gokarn, a pilgrim centre of some importance, is a menace to the health of pilgrims and to the inhabitants of localities from which they come. Improvements in housing conditions, though so urgently called for, must occupy years; but a start might well be made in lodging houses for pilgrims.

66. In the Central Registration District, 3,558 deaths from phthisis were registered, the death-rate being ·70. The highest number of deaths (1,835) were reported from Ratnagiri District. The urban death-rate was 1·39 against one of ·63 for rural areas.

The highest urban death-rates were recorded in Chiplun (2·73), Ratnagiri (2·59), Poona (2·15), Satara (1·87), Vengurla (1·56), Poona Cantonment (1·55), Ahmednagar (1·39), Sholapur (1·37), Junnar (1·25), Baramati (1·18), and Malwan (·91).

67. In Sind 552 deaths from phthisis were registered against 641 in 1915. Of the total deaths no less than 460 were recorded in Karachi and Hyderabad Towns.

Injuries.

68. There were 8,096 deaths recorded, of which 4,543 were among males and 3,553 among females. The number registered in 1915 was 8,113 and the decennial mean was 7,277.

The number of deaths registered annually as due to injuries since 1905 is shown below :—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1905 ...	6,586	1908 ...	7,109	1911 ...	7,452	1914 ...	7,670
1906 ...	6,830	1909 ...	7,029	1912 ...	7,175	1915 ...	8,113
1907 ...	6,799	1910 ...	6,885	1913 ...	7,711	1916 ...	8,096

69. Deaths by sexes are arranged under the various heads and compared with those in 1915 in the following table :—

Causes.	1916.			1915.		
	Male.	Female.	Total.	Male.	Female.	Total.
Drowning	1,346	1,780	3,126	1,410	1,746	3,156
Poisoning	124	52	176	87	60	147
Hanging	154	75	229	132	74	206
Wounding	927	451	1,378	875	434	1,309
Wild beasts	25	9	34	37	10	47
Snake-bite	962	559	1,521	1,104	646	1,750
Rabies	191	106	297	145	67	212
Railway accidents	84	14	98	78	9	87
Other causes	730	507	1,237	713	486	1,199
	4,543	3,553	8,096	4,581	3,532	8,113

70. There were 1,521 deaths due to bites by snakes against 1,750 in 1915. The highest number of deaths occurred in Ratnagiri (207), Thana (145), Satara (133), Ahmedabad (85), Kolaba (72), Larkhana (69); while the lowest (2) was recorded in the City of Bombay.

There is always difficulty in identifying the species of snake responsible for the death, and no information is available as to the number of persons bitten who recovered.

In the Southern Registration District, in 36 cases the snake was identified as a cobra; and in these the interval between the bite and death varied from an hour to a day.

In Gujarat, 116 deaths were ascribed to the bite of the "black serpent," probably the black cobra, and in these the interval between the bite and death varied from an hour to 36 hours.

71. Two hundred and ninety-seven deaths, of which 40 were registered in Kaira District, were reported from rabies. Bombay City returned 8 deaths.

72. There were 539 suicidal deaths (296 males and 243 females) against 539 (271 males and 268 females) in 1915.

The highest number of suicides were reported from Bombay City (61), Dharwar District (49), Thana District (46), and Belgaum District (35). Of the 61 deaths in Bombay City, 13 were the result of drowning, 34 of poisoning, 6 of hanging and 8 of wounding; of the 49 deaths in Dharwar District, 15 were the result of drowning, 1 of poisoning and 33 of hanging; of the 46 deaths in Thana District, 9 were the result of drowning, 3 of poisoning, 33 of hanging and 1 of wounding; of the 35 deaths in Belgaum, 10 were the result of drowning, 1 of poisoning and 24 of hanging.

Other Causes.

73. One hundred and sixty-five thousand three hundred and eighty-two (84,660 males and 80,722 females) deaths were registered as compared with 138,006 in 1915 and the decennial mean 139,411.

The annual number of deaths registered under this heading since 1905 is as follows:—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1905 ...	132,666	1908 ...	124,275	1911 ...	130,871	1914 ...	159,720
1906 ...	142,478	1909 ...	128,495	1912 ...	162,143	1915 ...	138,006
1907 ...	124,575	1910 ...	149,735	1913 ...	133,815	1916 ...	165,382

The death-rate for the Presidency was 8·44 against 7·05 in 1915.

74. *Measles.*—In the Southern Registration District 1,349 deaths were recorded from measles against 106 in 1915: 1,164 were among children under 5.

In the Guzerat Registration District 4,048 deaths were registered against 231 in 1915. There was a very severe epidemic in Ahmedabad resulting in 2,447 deaths, of which 91 per cent. occurred in children under 5. The epidemic was at its height between February and May.

In the Central Registration District 1,287 deaths were recorded: 142 of these being from Poona City, where the epidemic prevailed between May and August.

In Sind there were 897 deaths against 36 in 1915. Five hundred and fifty-nine deaths were reported from Karachi and Hyderabad cities where the epidemic manifested itself in March and April. Ninety per cent. of the deaths were in children under 5 years of age.

75. The number of deaths from chief diseases occurring in each Collectorate, by months, are shown in annual Forms Nos. VII to XII.

SECTIONS VII and VIII.—No remarks.

SECTION IX.

SANITARY WORKS—CIVIL.

76. The combined income of the 156 Municipalities, whose inhabitants total 2,367,323, came to Rs. 1,18,44,025, of this the sum of Rs. 61,18,594 was raised by taxation. The incidence of taxation per head of population averaged Rs. 2·6. The incidence of income per head varied between 10·4 annas in the Ashta Municipality of Satara District and Rs. 9·3 in Karachi City.

On water-supply, drainage and conservancy 38 per cent. of the total income was spent against 27 per cent. last year.

Progress must be slow, especially in those towns which cannot maintain a trained public health staff. During the year considerable improvement in conservancy was made in several towns in Gujarat, mainly as a result of the employment of health officers and sanitary inspectors who were helped in their work by constant advice from the Deputy Sanitary Commissioner.

Out of 3 first class, 1 second class, and 1 third class health officers appointed, 2 first class (Ahmedabad and Surat), 1 second class (Broach) and 1 third class (Nadiad) are employed in Gujarat. Out of 35 trained sanitary inspectors appointed 18 are working in Gujarat towns. Surat is now a training centre for Municipal sanitary and executive officers, and the Nasik system in force there has been adopted by the Municipalities of Broach, Dholka, Viramgaon, Prantij, Godhra and Nadiad and will be adopted by the Bulsar Municipality. Health Officers have recently been appointed for the Municipalities of Dhulia and Bandra. There is a temporary difficulty in obtaining suitable men to fill vacancies in the Municipalities of Pandharpur, Sukkur and Shikarpur. A health officer has been appointed at Hyderabad (Sind) on condition he obtains the requisite qualifications.

Poona Municipality have the services of a first class health officer and four trained sanitary inspectors. Up to date no progress has been made in registration and little in surface cleanliness. The sewerage project has abolished the offensive trenching grounds and has greatly facilitated the work of the conservancy staff.

In last year's report attention was drawn to the necessity for a conveyance allowance for health officers, and of the desirability of the delegation to them of certain powers. Both these matters have been taken up in the Northern Division. In the early days of Municipal public health work difficulties must arise: it would save friction if Municipalities in appointing health officers would remember four points:—the health officer must get rapidly about the city; he must have some control over the subordinate conservancy staff; he must have assistance in clerical work; and he must, if his scientific knowledge is to be up-to-date, have access to a reference library and to the current public health literature.

Advice was given by Deputy Sanitary Commissioners during the year to 52 Municipalities:—Amalner, Chopda and Erandol in East Khandesh District; Shirpur, Shahada and Taloda in West Khandesh District; Igatpuri and Trimbak in Nasik District; Bhiwandi and Kalyan in Thana District; and Panwel in Kolaba District; Islampur, Vita, Ashta and Tasgaon in Satara District; Rajapur and Ratnagiri in Ratnagiri District; Alandi in Poona District; Pandharpur, Sangola and Sholapur in Sholapur District; Belgaum, Nipani, Gokak in Belgaum District; Hubli, Haveri, Ranebennur, Gadag in Dharwar District; Guledgud, Bijapur and Bagalkot in Bijapur District; Kumtha and Haliyal in Kanara District; Mehmedabad, Nadiad, Anand, Borsad, Umreth, Dakore, Mahuda, Kapadvanj and Kaira in Kaira District; Prantij, Ahmedabad and Dholka in Ahmedabad District; Broach in Broach District; and Surat and Rander in Surat District; Bubak and Sehwan in Larkana District; Mirpurkhas and Umerkot in Thar and Parkar District.

The Sanitary Board sanctioned the preparation of three projects:—improvements to Dhulia water-supply; diversion of the Bhagirthi Nalla and paving and covering the stream leading from Bhagirthi Kund at Alandi; and balancing tank for the sewage pumping station at Ahmedabad. 18 water-supply and 2 sewerage projects made progress or were completed. The water obtained from the deep bore at Viramgaon is being drunk by the people.

77. Several improvement schemes were completed or progressed during the year.

In Karáchi sewers and drain were extended to Civil Lines and Frere town, and a portion of the bed of the Lyari river was reclaimed. In Kotri hollows, which provided breeding grounds for mosquitos, were filled up. In Surat the Golvad improvement scheme was completed, and the improvement of another area—Nagada's Tekra—was taken in hand. In Broach the Borwad scheme was completed, and progress was made with the Gandhi bazaar scheme. In Gadag Bettegiri an important drain was completed with the aid of a Government grant of Rs. 20,000.

The Analyst to Sanitary Board conducted routine analyses of the Poona Cantonment and City water-supplies, and of the effluent from the City sewage disposal works.

78. The number of Táluka Local Boards fell from 216 to 215 owing to the conversion of Jamkhed Táluka in the Ahmednagar District into a Mahál.

The combined income of 26 District and 215 Táluka Local Boards fell from Rs. 84,74,757 to Rs. 78,66,936.

The incidence of income per head of population was 6·9 annas. Less than 5 per cent. of the income was spent on public health measures.

79. Under Government Resolution, General Department, No. 2062 of 22nd March 1916 a grant of Rs. 62,000 was made for improvement of village water-supplies and it was distributed as follows:—

	Rs.		Rs.
Northern Division ...	20,000	Southern Division ...	10,000
Central Division ...	20,000	Sind Division ...	12,000

The allotments were expended in making new tanks and deepening existing tanks; constructing new wells; boring operations; repairing old wells, building troughs and cisterns and closing step-wells.

A grant of Rs. 20,000 was also placed at the disposal of the Commissioner, Northern Division, for the improvement of water-supply in the Districts of Gujarát affected by deficient rainfall.

80. In 318 villages in the Presidency step-wells have been converted into draw-wells. The result on the incidence of guinea-worm in these villages has in the vast majority of instances been remarkable: in many the disease has entirely disappeared, and in others checked. The conversion of step-wells into draw-wells is an inexpensive simple measure, and can be extended with much benefit to the people.

81. Action with regard to overcrowding has been taken in 92 villages in the Presidency.

In Belgaum District land has been acquired in the case of 8 villages: in one village the villagers purchased land privately: in 6 villages work is proceeding and for 3 villages proposals are under consideration.

In Bijápur District the acquired land has been handed over in one village: in 3 land has been acquired; and action is being taken with regard to 59 other villages.

Land for extension has been acquired in the case of 11 villages situated in the districts of Násik (4), Sholápur (2), East Khándesh (1), West Khándesh (1), Panch Mahals (1), Kaira (1) and Poona (1).

82. The number of Notified areas was 25. During the year Notified Area Committees were established at Malsiras in Sholápur District; and at Indi in Bijápur District. At the end of 1916 Rajápur Municipal district was changed into a Notified area. Ghatkopar in Thána District was converted from a Notified area to a Municipal district.

The total population served by Notified Area Committees' was 115,919. The total income during the year excluding opening balance came to Rs. 1,24,668, giving an income per head of population of Rs. 1·08. Details of income and expenditure are given in following table :—

District.	Serial No.	Names of towns and villages.	Population.	Income including opening balance.	Expenditure.	Balance.
				Rs.	Rs.	Rs.
Thána	1	Andheri ...	3,749	14,100	12,056	2,044
	2	Borivli ...	4,577	5,901	5,573	328
	3	Malad ...	3,887	8,470	7,845	625
	4	Santa-Cruz ...	1,072	17,779	7,050	10,729
	5	Vile-Parle ...	4,820	11,201	2,654	8,547
Broach	1	Palej ...	4,255	6,874	5,182	1,692
Sholápur	1	Madha ...	5,306	3,925	2,504	1,421
	2	Kurduwadi ...	5,760	5,024	1,567	3,457
	3	Malsirás ...	3,437	352	63	289
Poona	1	Dhond ...	3,112	10,286	2,897	7,389
East Khándesh ...	1	Chalisgaon ...	9,453	26,132	15,927	10,205
	2	Pachora ...	5,461	8,719	7,687	1,032
Násik	1	Manmad ...	3,495	12,404	5,546	6,858
	2	Nandgaon ...	6,961	12,151	8,150	4,001
Bijápur	1	Hungund ...	6,441	2,685	1,875	810
	2	Muddebihal ...	4,055	2,725	1,701	1,024
Ratnágiri ...	1	Dápoli ...	3,023	5,696	4,077	1,619
	2	Rajápur ...	6,349	14,804	11,079	3,725
Belgaum	1	Khanápur ...	4,280	2,025	1,540	485
	2	Bail-Hongal ...	9,610	7,098	4,187	2,911
	3	Chikodi ...	6,897	6,495	2,739	3,756
Kolába	1	Karjat ...	1,781	3,083	1,844	1,239
Dhárwár	1	Hangal ...	4,898	2,132	631	1,501
	2	Hirekerur ...	3,240	1,204	507	697

The income of the Notified Area Committees is small, and must be expended very carefully if the inhabitants are to receive full advantage.

Advice was given to 4 Notified Area Committes—Nandgaon and Malegaon (in Násik District), Khanápur (in Belgaum District) and Madha (in Sholápur District) by Deputy Sanitary Commissioners during the year.

83. The following statement shows the account of the two Sanitary Boards which worked during the year :—

District.	Number of Sanitary Board.	Names of Villages.	Income with opening balance.	Expenditure.	Closing Balance.
			Rs.	Rs.	Rs.
Kánara ...	1	(1) Kondli ...	577	294	283
		(2) Baliko.			
Surat ...	1	(1) Chikhli ...	1,692	1,060	632
		(2) Samroli.			

84. During the year under report there were 399 Sanitary Committees at work in the Bombay Presidency.

In the Northern Division comprising the districts of Thána, Ahmedabad, Surat, Kaira, Broach and Panch Maháls 80 Sanitary Committees are established, of which 8 were created during the year : 5 (Sunav, Uttersanda, Narsanda, Dabhan and Chunel) in Kaira District; 2 (Tavra and Tankaria) in Broach District and 1 (Margol) in Thána District. Consideration is being given to the formation of Committees at Ras and Devol in Kaira District and at Padgha in Thána District.

Owing to the increase in the number of Sanitary Committees in this Division Government sanctioned an additional grant of Rs. 1,928 and the quinquennial grant now stands at Rs. 13,694.

In the Central Division comprising the Districts of Sátára, Sholápur, East and West Khándesh, Ahmednagar, Poona and Násik, 73 Sanitary Committees worked; of these 2 were newly formed :—1 (Borgaon) in Sátára District and 1 (Sonai) in Ahmednagar District.

In the Southern Division comprising the districts of Belgaum, Dhárwár, Bijápur, Kánara, Kolába and Ratnágiri there were 74 Sanitary Commitees, of which 12 were newly established, viz. :—2 (Chadchan and Talikot) in Bijápur District; 8 (Belvadi, Harobidi, Nandgad, Sirsangi, Bhoj, Kongnoli, Sadalge and Akol) in Belgaum District; 2 (Kusugal and Koliwad) in Dhárwár District. There were no Sanitary Committees in the Kánara District.

In the Sind Division comprising the districts of Karáchi, Hyderabad, Nawabshah, Sukkur, Lárkána, Thar and Párkar and Upper Sind Frontier, there were 172 Sanitary Committees working; of which 14 were newly formed :—1 (Mubarakpur) in the Upper Sind Frontier; 2 (Rohath and Kachi) in Karáchi; 6 (Padhra, Kahikahu Daryakhan Mir, Dabhro, Mehrabpur and Mohbat-Deo-Jatoi) in Nawabshah; 4 (Walid; Naodero, Radhan and Puranodero) in Lárkána District; 1 (Drakhen) in Sukkur District. The Sanitary Committee at Tando Mitha Khan in the Thar and Párkar District was abolished and the balance lying at its credit was transferred to the Táluka Local Board, Sanghár.

The following statement shows the income and expenditure of the Sanitary Committees :—

District.	No. of Sanitary Committees.	Total income including opening balance.	Popular contributions.	Total Expenditure.	Closing Balance.
		Rs.	Rs.	Rs.	Rs.
Thána	7	12,562	3,051	4,735	7,827
Surat	14	15,329	4,797	12,734	2,595
Kaira	23	27,841	7,052	12,902	14,939
Broach	23	22,228	5,133	11,600	10,628
Panch Maháls	5	9,778	2,432	5,349	4,429
Ahmedabad	8	9,873	2,068	5,701	4,172
Total of Northern Division ...	80	97,611	24,533	53,021	44,590
Sátára	15	8,756	3,807	6,379	2,377
Sholápur	3	2,654	570	1,210	1,444
East Khándesh	11	36,811	9,495	20,883	15,928
West Khándesh	9	16,703	2,911	7,037	9,666
Ahmednagar	16	16,273	4,560	9,320	6,953
Poona	3	3,169	380	621	2,548
Násik	16	18,077	3,445	7,137	10,940
Total of Central Division ...	73	1,02,443	25,168	52,587	49,856
Belgaum	26	24,607	8,800	15,205	9,402
Dhárwár	28	31,162	7,663	14,829	16,333
Bijápur	9	9,324	1,835	2,390	6,934
Ratnágiri	2	4,911	2,312	3,446	1,465
Kolába	9	4,089	796	2,009	2,080
Total of Southern Division ...	74	74,093	21,406	37,879	36,214
Karáchi	32	24,314	4,698	11,008	13,306
Hyderabad	21	25,925	3,982	10,799	15,126
Lárkána	46	31,062	6,449	17,534	13,528
Thar and Párkar	22	10,157	5,156	3,955	6,202
Nawábshah	24	12,457	2,653	5,964	6,493
Sukkur	18	14,002	3,687	10,293	3,709
Upper Sind Frontier ...	9	11,644	2,858	7,186	4,458
Total of Sind Division ...	172	1,29,561	29,483	66,739	62,822

42 villages in which Sanitary Committees are working were visited by Deputy Sanitary Commissioners during the year. With the available income only the very simplest matters can be attended to, but even such simple matters, if efficiently carried out, will benefit the people. In one of the

Divisions of Dhárwár District all the Sanitary Committees subscribed for quinoidine; all took action with regard to prickly pear in and around the village; and most employed sweepers and watchmen for the drinking water tanks.

In the Karáchi District Sanitary Committees have built slaughter houses and latrines; cleared the villages of undergrowth; provided dust-bins and in some instances rubbish carts, and also incinerators; and in two villages schemes for the drainage of storm water are being prepared.

In East Khándesh District four of the Committees:—Ranala, Prakasha, Pimpalner and Nawapur—have improved communications; and the three last have done much for the village lighting.

In Násik District 3 of the Committees:—Naydongri, Bolthan and Chandor—have effected useful improvements in conservancy.

85. There are 7 Sanitary Associations working in the Presidency, of these two—at Ahmedabad and Viramgaon—were constituted during the year. They all do useful work, mainly educational. The Association at Surat held a health exhibition during the year.

86. Reference in Section 6 has been made to the influence of pilgrim centres in the spread of epidemic disease. The report of the Pilgrim Committee was submitted during the year, and this indicated the measures which in the opinion of the Members of the Committee it is desirable to carry out.

Special attention during the year was given to the festivals held at Pandharpur, Dakore and Alandi. At all these places cholera broke out during the year, and resulted in a number of preventable deaths throughout the Presidency. Special mention is made of Mr. da Gama's indefatigable work at Pandharpur. He has visited Pandharpur at the time of all the principal festivals, and mainly through his work the conservancy has improved with marked reduction in the plague of flies. The water-supply at Pandharpur has proved of great benefit, and there is indication that there is a marked reduction in the deaths of children from bowel complaints. The influence of man in the spread of both cholera and plague is well known, and it is obvious that the Municipalities of all pilgrim centres would be well advised to take all reasonable steps to render their towns proof against the spread of infection.

At the end of the year a special pilgrimage went on foot from Alandi to Benares. So far as is known this passed off without untoward result.

SECTION X.

87. The Deputy Sanitary Commissioners visited 965 towns and villages. Complete sanitary surveys were made of 91 towns and villages, of which 45 were Municipal towns, 4 Notified Areas and 42 had Sanitary Committees. They entered remarks in 82 Village Sanitary Inspection books while the Inspectors of Sanitation and Vaccination wrote in 265 books.

The Deputy Sanitary Commissioner, Western Registration District, visited 62 towns and villages for general sanitary purposes: such as epidemics of cholera and plague; inspection of police lines and selection of sites for schools and new police lines; water-supplies and town improvements; and 162 villages for vaccination inspection.

The Deputy Sanitary Commissioner, Central Registration District, visited 43 towns and villages for general sanitary purposes such as:—epidemics of cholera and plague; prevalence of malaria and guinea-worm; selection of sites for schools; and 166 villages for vaccination.

The Deputy Sanitary Commissioner, Southern Registration District, visited 27 towns and villages for general sanitary purposes, and 89 villages for vaccination inspection.

The Deputy Sanitary Commissioner, Gujarat Registration District, visited 43 towns and villages for general sanitary purposes and 64 villages for vaccination inspection.

The Deputy Sanitary Commissioner, Sind Registration District, visited 33 towns and villages for general sanitary purposes and 195 villages for vaccination inspection.

The Deputy Sanitary Commissioners spent an active useful year, and Colonel Anderson, Mr. Jamshyd Munsiff and Mr. da Gama gave valuable assistance in the cholera epidemic.

The Sanitary Commissioner visited 69 towns during the year in connection with epidemics and for general sanitary purposes.

F. H. G. HUTCHINSON, M.B., C.M., D.P.H.,
Lieutenant-Colonel, I. M. S.,
Sanitary Commissioner.

Poona, 14th July 1917.

APPENDIX I.

ANNUAL REPORT OF THE SANITARY BOARD, BOMBAY PRESIDENCY, FOR THE YEAR 1916.

During the year under report there was no change in the constitution of the Board.

Four meetings of the Board were held for the discussion of the cases submitted to the Board for consideration and the following important subjects were dealt with :—

(1) Question regarding the procedure to be followed in the preparation of water supply and drainage schemes.

(2) Treatment of the Poona City water supply during monsoon with alum and bleaching powder.

(3) Postponement of the execution of the proposed Alandi water supply scheme.

(4) Proposals regarding the immediate financing of the Sukkur water supply improvement scheme.

(5) The purchase of the Indian Research Fund Laboratory building for the purpose of the Board's Laboratory.

2. The distribution of the grant of Rs. 50,000, placed at the disposal of the Sanitary Board this year, was as under :—

	Rs.
Sind	8,519
Northern Division	5,902
Central Division	17,126
Southern Division	18,453
Total ...	50,000

The grant for the Northern Division was unavoidably low owing to the high prices ruling for the materials required for latrine construction which formed the majority of the work for which grants were recommended.

3. The preparation of the following projects was sanctioned by the Board :—

(1) Improvements to Dhulia water supply.

(2) Diversion of the Bhagirthi Nalla and paving and covering the stream leading from Bhagirthi kund Alandi.

(3) Balancing tank at the sewage pumping station at Ahmedabad.

4. The projects submitted and sanctioned by Government were as under :—

(1) Revised estimate for the Distillery refuse purification installation at the Central Distillery at Khanapur.

(2) Revised plans and estimates for Lonavla water-supply project.

(3) Treating the Poona City settling tanks with chloride of lime and sulphate of alumina.

5. The following grants were sanctioned by Government to the Municipalities in the Presidency :—

	Rs.
(1) Poona drainage and water supply	57,168
(2) Karad water supply	30,000
(3) Lonavla water supply	46,770
(4) Village water supplies	62,000

6. The following water works projects were completed or in progress during the year :—

Sind.

Karachi.—One thousand feet of masonry conduit was constructed. Also 700 R. ft. gallery at a depth of 40 to 45 feet from well No. 4 was carried out. Expenditure Rs. 1,36,008.

Hyderabad (Sind).—All the work remaining of the water supply improvement scheme was completed with the exception of (1) the partition wall and roofing of the Shahakadam tank and (2) the High Level Service Reservoir. Expenditure Rs. 28,902.

Northern Division.

Ahmedabad.—A cement concrete floor was made to the new jack well E. A portion of the collecting main was laid and supply wells Nos. 5 and 6 were lowered. Mains of a total length of 9 miles were laid. Expenditure Rs. 52,180.

Kharaghoda.—Pipes were laid from Kharaghoda tank to New Agar. Expenditure Rs. 1,130.

Surat.—Venturi meter and meter testing apparatus were fixed and hydrants and sluices were constructed. Expenditure Rs. 7,538.

Central Division.

Poona City.—The work of laying mains from the high level reservoir was completed and the old city branches connected to the new system. The supply was sterilized by chlorinating the same throughout the year. Expenditure Rs. 94,457 (combined for Drainage and Water Supply).

Poona Cantonment.—Installation of the Paterson Filter plant was completed. Expenditure Rs. 58,047.

Lonavla and Khandala.—All head works were completed. Venturi meter was fixed on the gravitation main and a 6″ leakage connection with a small leakage tank was added. All other sundry works remaining to be executed were completed. Expenditure Rs. 26,961.

Sholapur.—A new 15″ main was laid and the old 12″ main was relaid. A new reinforced concrete high service reservoir was constructed and a division wall built in the settling tanks. Expenditure Rs. 69,132.

Barsi.—The service reservoir and the trenches for laying the gravitation main were nearly completed. Expenditure Rs. 86,000.

Ahmednagar.—The remaining work of the earthen dam was completed. Pipes in the valve tower and tunnel were fixed in position. Sundry masonry works in connection with water works were also completed. Expenditure Rs. 1,66,173.

Karad.—All the works remaining in connection with the water supply scheme were completed with the exception of pumping installation. Expenditure Rs. 85,360.

Vita.—The gallery and pumps for the new well were constructed and the steps to the existing well (Tabkadi) were closed. Expenditure Rs. 4,465.

Southern Division.

Rajapur water works.—Additions to the pavement in the cushion chamber and repairs to the coping were carried out. Expenditure Rs. 1,340.

Ratnagiri water works.—Relaying of distribution pipe was carried out. Expenditure Rs. 6,195.

Alibag water works.—The up-stream face of the dam was pitched and other repairs carried out to the distribution system. Expenditure Rs. 1,364.

Pen.—Construction of settling tank, pure water tank for storing leakage water, renewals of earthenware pipes and several other minor improvements were carried out. Expenditure Rs. 6,799.

Panvel water works.—The pipe crossing in the river bed was protected from floods. Expenditure Rs. 4,359.

The following drainage works were either in progress or completed during the year :—

Karachi.—The work of laying gravitation sewers in connection with the scheme of drainage on the Shone system in Civil Lines and Frere town quarters was in progress. Half a mile of sewers and air discharge mains were laid during the year. Engine and Engine house for the new compressor was completed ready for working. Expenditure Rs. 76,331.

Poona drainage.—Works constructed during the year were as under :—

Branch sewers		2,282′
Manholes	(number)	876
Flushing tanks from 500 to 1,000 capacity ...	(number)	32
Pail depôts	(number)	6
House connections	(number)	1,049

The completed sewers and house connections were handed over to the Municipality. The purified effluent was used for cultivation near the septic tanks. Expenditure Rs. 94,457 (combined for Drainage and Water Supply).

A V-shaped drain, 3,325′ long, for the Mereodha Nalla near Poona was constructed. Expenditure Rs. 11,800.

Glazed stone-ware drain in the Ganeshkhind Botanical Gardens was laid. Expenditure Rs. 3,469.

7. Sixty-six projects were under investigation by the Sanitary Engineer to Government (32 by the Executive Engineer, Southern Sanitary District, 27 by the Executive Engineer, Northern Sanitary District, and 6 by the Sub-Divisional Officer, Sind Sanitary Sub-Division).

Those nearing completion are :—

(1) Uran water supply (since submitted).
(2) Nipani water supply.
(3) Mahableshwar water supply.
(4) Improvements to Satara water supply.
(5) Pandharpur drainage.
(6) Borsad water supply.
(7) Dholka water supply.
(8) Godhra water supply.
(9) Bhusaval water supply.
(10) Surat drainage.

8. Borings for artesian water supplies were in progress during the year at the following places :—

	Depth of Boring reached.
Broach	1,565 feet.
Viramgam	776 „
Dholera (2nd bore)	386 „
Ranebennur (2nd bore)	62 „
Udoo	300 „

A fine artesian supply was tapped at Viramgam and yields 225 gallons of potable water per minute. This boring is a distinct success though the effect of the presence of a small quantity of sulphate of soda in the water is being watched. A water bearing stratum was encountered at Udoo at a depth of 300 feet and yields 150 gallons per minute. As the water is poor in quality the bore is being carried to a greater depth with a hope that a similar water to the Viramgam water will be met with at a greater depth.

Boring for ascertaining rock foundations were carried out at Mora and Godhra.

9. The services of the Analyst to the Sanitary Board were placed under the control of the Sanitary Commissioner for the Government of Bombay. Amongst other duties he carried out daily test of the Poona Cantonment and City water supplies.

10. The Sanitary Engineer to Government carried out his annual tour throughout the Presidency and gave advice to Local Bodies generally. The Engineering establishment under the Sanitary Engineer to Government was considerably reduced on account of the war necessitating a slower rate of progress on the project work carried out by him.

H. O. B. SHOUBRIDGE, M.Inst.C.E.,
Secretary, Sanitary Board,
Bombay Presidency.

APPENDIX II (*a*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31ST DECEMBER 1916.

I.—SUMMARY.

The following summary shows the inspection and disinfection work done in the Port of Bombay in connection with out-going and in-coming vessels as well as those lying in the harbour and docks during the year ending 31st December 1916 :—

One thousand two hundred and fifty-three vessels of all sorts with 365,956 crew and passengers were examined as against 950 vessels with 203,880 crew and passengers during the preceding year.

The clothing, bedding and other articles of 95,281 members of crews and passengers of out-going and in-coming vessels and of members of crews of vessels lying in the Port were disinfected. Of these, 83,855 were Asiatic and African members of crews, third class or deck European and Native passengers and pilgrims who left the Port of Bombay for ports out of India and 11,426 were members of crews and passengers who arrived by vessels on which cases of infectious diseases had occurred during the voyage or while in the Port. In addition to the abovementioned numbers, 3,304 baggage coolies and stevedores' men were disinfected in order to enable certain vessels to work cargo for a few hours after medical inspection and disinfection of their crews and passengers.

Sixty-five vessels on which cases of infectious diseases had occurred were disinfected and 3 vessels which carried pilgrims to Jeddah were thoroughly cleansed and freed from rats, cockroaches, etc., by means of sulphur dioxide gas generated in a Clayton apparatus. Besides the three out-going pilgrim ships 25 in-coming and 23 out-going vessels were fumigated. Four hundred and seventy-six persons among whom cases of small-pox had occurred were vaccinated. In addition to this number 2,449 out-going pilgrims were vaccinated by a special Vaccinating Staff lent by the Municipality under the direction of the Police Commissioner. Inoculation was offered to the members of crews of plague-infected vessels but none were willing to undergo it.

II.—OUT-GOING VESSELS.

2. In accordance with Government Notification, General Department, No. 5331, dated the 6th July 1915, the medical examination of all vessels, crews and passengers proceeding to ports out of India, and the disinfection of the clothing and bedding of all Asiatic and African members of crews, of all passengers travelling 3rd class who were not provided with berth accommodation, of fourth class and deck passengers and of all Asiatic and African servants who sailed on such vessels were carried out immediately before they left the Port of Bombay.

3. One thousand and fifty-seven outward bound vessels (including one Asiatic sailing craft) with 115,422 crew and 177,680 passengers or a total of 293,102 persons were inspected as against 791 vessels with 78,479 crew and 84,246 passengers or a total of 162,725 persons during the preceding year.

4. The bedding, boxes and suspected articles of clothing, etc., of 67,751 Asiatic and African members of crews and of 16,095 third class, fourth class and deck passengers and pilgrims who sailed on steamers bound for ports out of India were disinfected. In addition to this disinfection, the clothing, bedding and other effects of 9 members of crews who sailed in one Asiatic sailing craft for ports out of India were also disinfected.

5. A few vessels had cases of infectious diseases among their crews and passengers within 12 days prior to their departure from this Port. The Bills of Heath granted to these mentioned the diseases which had occurred on board as well as the measures which had been taken before their departure for the prevention of the spread of infection on board or its introduction at other ports.

III.—IN-COMING VESSELS.

6. In accordance with the rules prescribed under Government Notification, General Department, No. 5331, dated the 6th July 1915, medical inspection and disinfection of vessels which were actually infected or suspected to be infected were carried out. All pilgrim ships and all vessels which arrived from East African Ports were also inspected on arrival.

7. One hundred and seventy in-coming vessels of various kinds with crews aggregating 20,497 persons and 50,715 passengers were thus inspected during the year. Of the 170 vessels, 39 were found to have had cases of infectious diseases on board at the time of arrival or during the voyage. Fifteen were Hospital Ships and Hired Transports from Aden and the Persian Gulf Ports with 2,080 crew and 3,209 troops, among whom 5 cases of plague, 19 cases of cholera, 8 cases of small-pox and 3 cases of measles had occurred. Of these, 4 cases of plague were landed at Aden, 2 died of cholera during the voyage and 2 cases of small-pox were landed—one at Colombo and one at Basra. The remaining cases were removed to the Maratha, Arthur Road and Military Hospitals for treatment. Fourteen were Hospital Ships and Hired Transports and 2 ordinary vessels from East African Ports with 2,267 crew and 12,472 troops and 642 passengers, among whom 24 cases of measles, 10 cases of

chicken-pox, 339 cases of jigger and 1 case of scarlatina had occurred. The jigger patients were removed to the Arthur Road and Jamsetji Jijibhoy Hospitals and to the Military Hospital at Colaba. The clothing and bedding of the passengers were thoroughly disinfected before they were allowed to proceed to their homes. The clothing and bedding of the crew were also disinfected. The remaining 10 vessels arrived from other ports with 1,998 crew and 2,797 passengers, among whom 1 case of plague, 1 case of cholera, 3 cases of small-pox, 11 cases of measles, 3 cases of chicken-pox and 4 cases of scarlatina had occurred. Of these cases, 1 death from plague occurred during the voyage and 3 cases of small-pox were landed at Calicut, Basra and Colombo. The vessels and the clothing and bedding of the crews and passengers were disinfected.

IV.—Infectious Diseases on Vessels arriving and departing and in the Harbour and Docks.

8. Tabular Statement No. 1 gives the number of cases of infectious diseases which occurred on vessels arriving, departing and in the harbour.

It will be seen that 432 cases occurred on vessels arriving as follows:— 6 cases of plague, 20 cases of cholera, 11 cases of small-pox, 35 cases of measles, 16 cases of chicken-pox, 339 cases of jigger and 5 cases of scarlatina.

At the inspections of crews and passengers of out-going vessels one case of small-pox and one case of chicken-pox were detected. Seven cases of plague, 6 cases of small-pox and 3 cases of chicken-pox were reported to have been landed at Aden from certain ships which arrived there from Bombay.

Five cases of plague, 3 cases of cholera, 13 cases of small-pox, 2 cases of measles and 8 cases of chicken-pox occurred on vessels including Asiatic sailing craft lying in the harbour and docks.

9. Tabular Statement No. 2 gives separately details of infectious diseases on vessels in the harbour and docks. The clothing and bedding of the crews of these vessels aggregating 1,642 persons were disinfected. All these vessels were thoroughly disinfected. The vessels on which plague cases had occurred were also thoroughly fumigated.

V.—Disinfection and Fumigation of Ships.

10. During the year under report 116 vessels of all sorts were disinfected and fumigated.

11. Of the 116 vessels referred to in the foregoing paragraph the fumigation of 51 vessels including 3 outward pilgrim ships was carried out by means of the Clayton process under the direction of the Port Health Officer. Six hundred and sixty-nine dead rats and innumerable cockroaches were found on these vessels after fumigation. Of these, one rat was found to be plague-infected on bacteriological examination at the Parel Laboratory. In addition to this number the British India Steam Navigation Company had 15 of their vessels and 2 outside steamers fumigated by their own apparatus under the supervision of the Port Health Staff. This number is not included in Tabular Statement No. 1.

12. The Port Disinfection Station received every Monday clothing and bedding from various hospitals for disinfection. Four hundred and twenty-three bundles containing such clothing and bedding were disinfected as against 527 during the previous year. Ninty-four thousand one hundred and sixty-two blankets, mattresses, pillows, pillow covers, sheets, towels, etc., and 440 bales of Army clothing were also disinfected during the year at the request of the Marine Store Officer and the Superintendent, Army Clothing Department. Three thousand three hundred and four baggage coolies to work cargo on outward bound vessels after obtaining bills of health were disinfected at the request of their Commanders and Agents.

VI.—General Health of the Shipping.

13. During the year under report 1,358 persons connected with the shipping were admitted into the various hospitals in the city. The St. George's Hospital admitted 586 European patients, of whom 22 died, 521 were discharged cured and 43 remained under treatment after the 31st December 1916. The Jamsetji Jijibhoy Hospital admitted 173 Asiatic patients, of whom 12 died; the Gokuldas Tejpal Hospital 451 Asiatics, of whom 48 died; and the Arthur Road Hospital 148 Indians including troops, of whom 5 died and 143 were discharged cured.

14. No deaths occurred in connection with the cleansing of bilges of ships during the year. There were 376 accidents on board of vessels which were lying in the harbour or docks.

VII.—Red Sea Pilgrim Traffic.

A.—Outward Pilgrim Traffic.

15. In accordance with the Government of India's Notification, Home Deparment (Sanitary), No. 1606, dated the 13th July 1908, and Government Resolution, General Department, No. 4361, dated the 18th August 1909, and Government of India's Notification, Department of Education (Sanitary), No. 635, dated Simla, the 24th April

1912, reproduced in Bombay Government Notification, General Department, No. 2759, dated 30th April 1912, the Port of Bombay was open for the embarkation of Muhammadans going on pilgrimage to Mecca via Jeddah. Before the pilgrims embarked at Bombay the ships were thoroughly cleansed and freed from rats by means of the Clayton process. The pilgrims were subjected to a very careful medical inspection and their clothing and bedding to a thorough disinfection before they were allowed to embark.

16. The names of the ships, the numbers of pilgrims carried by them and the dates on which they left Bombay for Jeddah are given below :—

Name of vessel.	No. of pilgrims sailed.	Date of departure.
1. S.S. "Sardar"	636	... 1st September 1916.
2. S.S. "Nairung"	756	... 8th do.
3. S.S. "Hejaz"	911	... 10th do.
Total ...	2,303	

17. In addition to the above, the S.S. "Akbar"—a non-pilgrim ship—left Bombay on 31st July 1916 for Jeddah with 329 pilgrims.

18. It will be seen that 2,632 pilgrims left during the season as against 2,432 in the previous year.

19. The classification of the pilgrims is as follows :—

33	Bombay City.	15	Chinese Territory.
56	Bombay Presidency (including Sind).	4	America.
28	Madras Presidency.	57	Afghanistan.
23	Bengal Presidency.	7	Baluchistan.
1,934	Eastern Bengal and Assam.	21	Persia.
95	United Provinces and Oudh.	27	Russian Territory.
102	Punjab and North-West Frontier.	19	Arabia.
5	Central Provinces.	125	Java.
5	Burma.	24	Malay States.
3	Ceylon (British Colony).	22	Unclassified.
27	Native States.		
2,311		321	

Total ... 2,632

20. Two thousand four hundred and forty-nine out-going pilgrims were vaccinated before starting by a special staff placed under the Police Commissioner by the Municipality. Besides these, some pilgrims from other Provinces and Native States had been vaccinated before leaving their homes for Bombay.

21. The Pilgrim Observation Camp at Perim was not opened during the year 1916 as per Government Order, General Department, No. 6923, dated the 6th September 1915, and No. 8785, dated the 15th November 1915.

22. From the medical diaries of the doctors in medical charge of pilgrim ships it appears that there were 5 deaths on board these ships between Bombay and Jeddah. The causes were old age, heart disease, general debility and pneumonia.

23. During the season under report no doctor was appointed to the medical charge of a pilgrim ship unless he was in possession of either a degree, or at least the license of a recognized Indian University, or the qualification of a Military Assistant Surgeon and had his name and qualifications registered in the United Kingdom or in India in accordance with the Government of India Notification, Department of Education (Sanitary), No. 14, dated the 7th January 1915.

B.—Inward Pilgrim Traffic.

24. During the year under report 8,103 pilgrims, including a number who left Bombay in the previous year's Haj, arrived from Jeddah in 8 vessels. The names of the ships and the number of pilgrims brought by each vessel are tabulated in Statement No. 3 which is appended to this report.

25. The total number of deaths which occurred at sea among the returning pilgrims was 32. The chief causes were old age, general debility, dysentery, diarrhœa, heart-failure, pneumonia, Bright's disease, anæmia, albuminurea and phthisis.

26. None of the pilgrim ships had any cases of infectious diseases during the voyage or on arrival at Bombay.

VIII.—Sanitary state of the Harbour and Foreshore.

27. The sanitary state of the harbour and of the various bandars, basins and docks was fairly satisfactory.

IX.—Cholera, Small-pox and Plague in the City of Bombay.

28. During the year under report 141 deaths from cholera, 1,021 deaths from small-pox and 1,987 deaths from plague occurred in the City of Bombay as against 16 from cholera, 359 from small-pox and 599 from plague during the preceding year.

X.—Establishment.

29. Lieut.-Colonel W. E. Jennings, I. M. S., was in charge of the Port Health Deparment from the beginning of the year to 23rd October 1916 and Lieut.-Colonel J. G. Hojel, I. M. S., from 24th October to the end of the year.

30. The following list shows the names of the Medical Officers and Subordinates and of the members of the Clerical and the Sanitary Police Staffs who did duty under the Port Health Officer during the year :—

Names.	Period of service.
(1) Medical Staff.	Y. m. d.
Dr. (Mrs.) S. Harrison	1 0 0
Sub-Assistant Surgeon B. M. Bhatt	0 11 15
Do. do. F. H. Anklesaria	0 9 16
Do. do. J. D. Khambatta	0 2 13
Do. do. B. M. Shah	0 0 20
Do. do. S. K. Lele	0 0 16
(2) Clerical Staff.	
Mr. Ramrao G. Kamalakar, Head Clerk	1 0 0
„ Shamrao S. Dhurandhar, Second Clerk	1 0 0
„ Dattatraya V. Gokhale, Third Clerk	1 0 0
(3) Sanitary Police Staff.	
Mr. A. Dixon, Inspector	1 0 0
„ G. Beldon	0 8 15
„ T. Naden	0 3 15

31. In addition to the abovementioned Medical Staff the services of a Commissioned Medical Officer had to be engaged on several occasions when work was heavy, particularly in connection with the simultaneous departures of numbers of troop-ships. An extra Lady Doctor had also to be engaged from time to time.

32. My predecessors Lieut.-Colonel W. E. Jennings and Lieut.-Colonel J. G. Hojel have reported favourably on the manner in which the Medical, Clerical and Sanitary Police Staffs and the members of the Launch, Disinfection and Menial Establishments carried out their respective duties. A considerable proportion of the work performed by them has been concerned with inspection, disinfection, fumigation, the granting of pratique and bills of health and other duties in connection with Hired Transports and Hospital Ships. Their services have been recognized as war service as per Government Order in the General Department No. 556-W, dated the 26th January 1917.

33. Moulvi Abdulla Ahmed, the Protector of Pilgrims, Mrs. M. Lennon, the Lady Superintendent of Pilgrims, Mr. H. M. Robottom, the Inspector of the Preventive Service and the Dock Police under Superintendent C. Priestley rendered much help to the Port Health Staff, while carrying out the inspection and disinfection of pilgrims and in connection with their despatch from the Disinfection Station to the steamers by which they travelled.

34. The Port Health Officer is also indebted for valuable assistance in the embarkation of pilgrims and otherwise to Mr. A. R. Bennett, Assistant Collector of Customs, who gave much of his time in order to help in securing harmonious working between the different departments concerned.

35. The shipping agents and commanders of vessels, as a rule, observed the regulations and carried out cheerfully the orders framed in connection witd the Paris Sanitary Convention.

W. M. HOUSTON, M.B., D.P.H.,
Major, I. M. S.,
Health Officer of the Port.

Bombay, Port Health Office:
Town Customs House, dated 17th March 1917.

TABLE No. 1.

The following tabular statement gives a summary of the shipping of the Bombay Port and work in connection therewith for the year ending 31st December 1916 :—

Vessels including country craft.	Number of vessels inspected.	Number of persons inspected including crew of vessels.	Number of Asiatic crew, 3rd class or deck passengers disinfected.	Number of vessels.		Number of persons vaccinated.	Diseases and number of cases of each.						
				disinfected.	fumigated.		Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Jigger.	Scarlet fever.
Entered	170	71,212	9,784	39	25	...	6	20	11	35	16	339	5
Left	1,057	2,93,102	83,855	...	26	2,925	7	...	7	...	4	...	...
In harbour during the year	26	1,642	1,642	26	...	...	5	3	13	2	8	...	...
Total ...	1,253	3,65,956	95,281	65	51	2,925	18	23	31	37	28	339	5
Total for 1915 ...	950	2,03,880	61,420	36	57	3,929	1	12	24	52	15	21	1

TABLE No. 2.

The following table includes all steamers, square-rigged vessels and native sailing craft which became infected while lying in the Port of Bombay during the year 1916 :—

Months.	Number of persons who were attacked with infectious diseases at the Bandars and Docks.		Total number of infected vessels.	Total number of infectious diseases in the Bombay Harbour.					Number of crew disinfected.
	Plague.	Cholera.		Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	
1916.									
January	...	...	...	...	...	...	...	...	...
February	...	...	1	...	...	1	...	...	60
March	...	...	11	1	...	8	...	3	631
April	...	...	4	...	...	2	1	1	377
May	...	...	5	4	...	1	...	3	343
June	...	...	1	...	...	1	...	...	122
July	...	...	1	...	...	...	1	...	77
August	...	...	...	...	...	...	...	...	...
September	...	...	1	...	...	...	...	1	8
October	...	...	1	...	1	...	...	...	16
November	...	...	1	...	2	...	...	...	8
December	...	...	...	...	...	...	...	...	...
Total ..	...	...	26	5	3	13	2	8	1,642
Total for 1915 ...	...	12	13	1	...	13	...	8	664

TABLE No. 3.

Statement showing the number of pilgrims who returned to Bombay from Mecca by vessels during the year 1916 :—

No.	Name of Ship.	Date of arrival.	Number of crew inspected.	Number of pilgrims inspected.	Number of deaths during voyage.	Number of cause of infectious diseases on board.		Remarks.
						On arrival.	During voyage.	
1	S.S. "Koweit" ...	11th January ...	102	751	5	...	...	
2	S.S. "Akbar" ...	22nd do. ...	121	981	8	...	...	
3	S.S. "Akbar" ...	11th March ...	131	1,515	5	...	...	
4	S.S. "Sardar" ...	9th October ...	83	779	2	...	...	
5	S.S. "Nairung" ...	18th do. ...	97	808	1	...	...	
6	S.S. "Hedjaz" ...	3rd November ...	93	946	5	...	...	
7	S.S. "Jehangir" ...	27th do. ...	124	1,304	5	...	...	
8	S.S. "Nairung" ...	13th December ...	98	1,019	1	...	...	
		Total ...	849	8,103	32	...	...	

APPENDIX II (*b*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF KARACHI FOR THE YEAR ENDING 31ST DECEMBER 1916.

I.—Out-going Vessels.

During the year under report 534 steam vessels outward bound for ports out of India were inspected by the Health Officer of the Port and were given Bills of Health as against 423 during the preceding year.

Of this number, 214 vessels were proceeding to Aden, the Red Sea and Europe, and 320 to other ports out of India including the Persian Gulf.

Bills of Health were also given after inspection to 1,032 country boats as against 462 during the preceding year.

The total number, therefore, of Bills of Health issued during the year under report was 1,566 as against a total of 885 issued during the preceding year—an increase of 77 per cent.

The Indian crews and deck passengers of all steamers and country craft proceeding to ports out of India were medically inspected, their boxes scrubbed and finally rinsed out with a solution of perchloride of mercury, and their bedding and clothing disinfected by steam in the "Equifex" Stoves at the Port Health Disinfecting Station, Kiamari, immediately before their departure from the Port of Karachi.

II.—In-coming Vessels.

During the year 43 vessels which arrived here in quarantine were inspected for the existence of infectious disease as against 19 vessels during the preceding year—an increase of 126 per cent.

Of these 43 steamers, 10 arrived from East Africa and the remaining 33 hailed from various other ports.

Six country boats (four from East African and two from other ports) also arrived in quarantine, and were duly inspected for the existence of infectious disease, as against nil during the preceding year.

III.—Synopsis of Inspection and Disinfection performed.

The following tabular statement shows the number of vessels, crews and passengers inspected during the year under report:—

	Vessels.			Crews and passengers.		
	Steamers.	Country boats.	Total.	Steamers.	Country boats.	Total.
In-coming... ...	43	6	49	9,520	129	9,649
Out-going... ...	534	1,032	1,566	127,587	12,098	139,685
					Total ...	149,334

Of the 149,334 crews and passengers who were medically inspected on their arrival at, or departure from, the Port of Karachi, 66,650 crews and passengers also had their bedding and clothing disinfected.

The corresponding figures for the preceding year being 115,966 and 44,631 respectively, the figures for the year under report show an increase of 28 and 49 per cent. respectively.

IV.—Miscellaneous Disinfection.

On several occasions during the year the clothing and bedding of patients suffering from infectious disease as well as the clothing and bedding of "contacts" were received for disinfection from the Epidemic Diseases Hospital, the Civil Hospital and other Institutions in Karachi, and from private individuals, and were duly disinfected by steam in the "Equifex" Stoves at the Port Health Disinfecting Station, Kiamari.

The following articles which were received for disinfection, during the year under report, from various Hospital Ships and Ambulance Trains were also duly disinfected, viz., 1,669 mattresses, 7,606 pillows and pillow cases, 1,724 blankets, 9,376 sheets, 2,328 towels and napkins, 1,789 table cloths, 1,588 dusters, 2,387 trousers, 815 shirts, 1,131 drawers, 2,161 coats, 358 jackets and 87 turbans.

V.—P. & O. Mail Passengers.

One hundred and thirty-nine saloon passengers proceeding to Europe viâ Bombay were medically inspected on shore at Karachi and given passes for direct transhipment to the P. & O. Mail Steamers at Bombay. The corresponding figures for last year was three hundred and three.

VI.—Plague.

During the year under report two cases of plague were removed from two in-coming vessels—one case from each vessel—to the Epidemic Diseases Hospital for treatment, and the following precautionary measures were duly carried out, viz., the holds, alleyways and forecastles were thoroughly fumigated by means of the Clayton Apparatus, the effects (clothing, bedding, etc.) of the crews and staffs on board were disinfected by steam in the "Equifex" Stoves, and before sailing hence for the Persian Gulf the vessels were placed in quarantine for five days, during which period no further cases of plague occurred on board among either crews or passengers.

On the 4th November telegraphic information was received from the Port Health Officer, Basra, to the effect that two coolies who had been working cargo on board a certain vessel at Basra had died on shore immediately before the vessel sailed thence for Karachi, and that (as the result of a post-mortem examination) the deaths were suspected of being due to plague.

Accordingly, on arrival at Karachi the vessel in question was disinfected, the officers and crew were kept under surveillance for a period of five days, the crew's effects were disinfected by steam on shore, and immediately before the vessel sailed hence for the Gulf the whole of the ship's company were medically inspected and found to be free from plague or any other infectious disease.

VII.—Cholera.

During the year under report twelve cases of cholera were removed to the Epidemic Diseases Hospital from three in-coming vessels, viz., three cases from the first vessel, three from the second and six from the third.

With regard to the first two vessels, the forecastles and other quarters occupied by the crews were thoroughly washed out with corrosive sublimate solution, the crews' effects (clothing, bedding, etc.) as well as all the mattresses, beddings, blankets, etc., belonging to the hospital personnel on board were disinfected by saturated steam at the Port Health Disinfecting Station, the water supply was treated with permanganate of potash, and no further cases of cholera or any other illness occurred on board the vessels before they sailed hence for the Persian Gulf.

The third vessel, after landing six cases, as mentioned above, continued her voyage to Bombay, and a telegram to that effect was duly despatched to the Port Health Officer, Bombay, for information and necessary action.

VIII.—Small-pox.

Four cases of small-pox were removed from four in-coming vessels, viz., one from the S.S. "Dwarka" and one each from three Government vessels. The necessary precautionary measures were duly carried out, and no further cases of small-pox occurred on board the vessels concerned.

During the year under report 744 persons (comprising the officers and crews of ten vessels) availed themselves of the prophylactic measure of vaccination which was offered to them in this port, and were duly vaccinated or re-vaccinated either at the Port Health Office or at the Municipal Dispensary, Kiamari, by the Superintendent of Vaccination.

IX.—Chicken-pox.

One case of chicken-pox was removed from the S.S. "Chakrata" to the Epidemic Diseases Hospital. The usual precautionary measures were carried out before the vessel sailed hence for Colombo a few days later, and no further cases of this disease occurred on board.

X.—Measles.

Three cases of measles were met with during the year, viz., two on the S.S. "Linga" and one on a Government vessel. All necessary precautionary measures were carried out on board, and no further cases were reported.

XI.—Parotitis (Mumps).

During the year nine cases of mumps were removed for treatment to the Civil Hospital, Karachi, from four Government vessels—all the patients being members of the ships' crews. The quarters which had been occupied by the patients and all the crews' effects (clothing, bedding, etc.) were thoroughly disinfected before the vessels concerned sailed for the Persian Gulf.

On the 28th February a Government vessel arrived at Karachi from the Persian Gulf with two cases of mumps among the troops on board, and sailed the same day for

Bombay where the troops (including the two patients) were to be landed. A telegram to that effect was despatched to the Port Health Officer, Bombay, for information and necessary action.

XII.—Diphtheria.

On the 7th February two cases of diphtheria were landed from a Government vessel which arrived here from England en route to Bombay, and reported that four other cases of the same disease had occurred during the voyage and had been landed,—one case at Port Said and three at Aden.

All necessary precautionary measures had been duly carrid out during the voyage by the Medical Staff on board, and on arrival here the patients and contacts were taken charge of by the Military Medical Authorities.

During her twenty-four hours' stay in this port the vessel was placed in strict quarantine, and the whole of the officers and crew were medically inspected and found to be healthy.

On the following day (8th February) a telegram was despatched to the Port Health Officer, Bombay, informing him of the occurrence of diphtheria on board and of the vessel's departure for Bombay.

XIII.—Yellow Fever.

No cases arrived at this port during the year. In May the Commissioner in Sind appointed a local Committee (of which the Collector of Karachi is Chairman and the Port Health Officer Secretary) to consider what precautions should be taken against the importation of Yellow Fever into Karachi and the arrangements that should be made to secure this object.

After examining and discussing the subject in detail, the Committee in due course submitted its proposals to the Commissioner for the consideration of Government.

XIV.—Jigger.

No cases of this disease were detected during the year.

XV.—Sleeping Sickness.

No cases of this disease were detected.

XVI.—Typhus Fever.

No cases were detected during the year under report.

XVII.—Cases of non-infectious diseases detected.

During the year under report seventeen cases of illness of all sorts (e.g., fever, dysentery, scurvy, beri-beri, etc.) were detected during the course of the usual medical inspection of crews and passengers before embarkation, and were sent to the Civil Hospital, Karachi, for treatment.

XVIII.—Deaths from non-infectious diseases reported on boardship.

During the year eleven deaths from various diseases (e.g., pneumonia, tuberculosis, heart disease, malaria, etc.) were reported as having occurred on board of vessels either in Karachi harbour or during the voyage to Karachi.

XIX.—Emigrants.

During the year under report one hundred and forty-one emigrants proceeding to Mombassa (East Africa) via Bombay were medically examined by the Health Officer of the Port in his capacity as Medical Inspector of Emigrants, and given certificates that they were in a fit state of health to undertake the voyage to East Africa, as required in section 65 (1) of the Indian Emigration Act of 1908.

XX.—Red Sea Pilgrimage.

Owing to the abnormal shipping and other conditions occasioned by the war, no pilgrim ships sailed from, or returned with pilgrims to, the Port of Karachi during the year under report.

XXI.—Clayton Apparatus.

During the year eight vessels were fumigated by means of the Clayton Apparatus before sailing hence for ports out of India, as against three fumigated during the preceding year.

Of this number six vessels were fumigated at the request of the Marine Transport Officer, and the remaining two at the request of their respective Agents.

XXII.—Sanitary State of the Harbour.

The sanitary state of the harbour was fairly satisfactory.

XXIII.—Port Health Establishment.

The following list shows the names of the Medical Staff who did duty under the Health Officer of the Port during the year:—

Names.	Period of Service.		
	Y.	m.	d.
Assistant Surgeon Samuel Joseph, L.M. & S.	0	9	19
,, ,, B. F. Khambatta, M.B., B.S.	0	2	12
Sub-Assistant Surgeon Baharsing Toursing Advani	1	0	0
Mrs. Lake, Lady Nurse	1	0	0

Assistant Surgeon S. Joseph was transferred to Hubli (Bombay Presidency) on 20th October 1916, and Assistant Surgeon B. F. Khambatta was appointed in his place.

The above-mentioned Medical Staff carried out their responsible duties with tact and efficiency.

The Clerk, Mr. Mahomed Jaffer Sheikh Ibrahim, performed his duties with zeal and efficiency.

The office peons and the members of the Disinfecting Station, Steam Launch and Clayton Apparatus Establishments worked satisfactorily.

H. CAREY VENIS,
L.R.C.P., L.R.C.S., D.P.H.,
Health Officer of the Port, Karachi.

Port Health Office, Kiamari,
Karachi, 27th February 1917.

APPENDIX II (*c*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT, ADEN, FOR THE YEAR 1916.

General Remarks.

Shipping.

Nine hundred and thirty-nine steamers and rigged vessels were granted bills of health during the year.

Of the above number, 686 were sailing under the British flag and 253 under Foreign flags.

Bills of health issued to vessels having had cases of infectious diseases on board were annotated according to the circumstances of each case.

Nine hundred and seven Bills of health were granted or issued to Dhows during the year.

The accompanying Table A gives a list of vessels on board of which infectious diseases existed on arrival. In the case of these vessels all sanitary precautions were taken to prevent the spread of the disease.

The following cases of infectious diseases were landed from the shipping :—

Small-pox	2	Chicken-pox... ...	3
Plague	3	Measles	1

II.—Pilgrim Traffic.

Two ships carrying pilgrims passed through this port during the year; all were medically inspected but they were not granted pratique.

Year.	No. of Ship.	No. of Pilgrims.	No. of Deaths.	Remarks.
1916	II	10,455	9	

III.—Table A.

List of vessels on board of which cases of infectious diseases existed on arrival at this port during the year ending 31st December 1916 :—

Date.	Name of Ship.	Nationality.	From	To	Number of cases.	Remarks.
4th January 1916...	H. S. "Syria" ...	British ...	Bombay ...	Suez ...	3 Plg.	Landed.
6th „ „ ...	S. S. "Mooltan" ...	„ ...	„ ...	London ...	1 Mls.	„
12th „ „ ...	„ "Akbar" ...	„ ...	„ ...	Jeddah ...	1 S.-p.	„
27th „ „ ...	H. T. "Huntsend"...	„ ...	„ ...	Overseas ...	„	„
6th March 1916 ...	H. T. "Lake Manetoba."	„ ...	„ ...	„ ...	„	„
10th „ „ ...	S. S. "Medomsley" .	„ ...	„ ...	Liverpool ...	„	„
11th „ „ ...	„ "Forfar" ...	„ ...	„ ...	Hull ...	„	„
12th „ „ ...	H. T. "Bandra" ...	„ ...	„ ...	Overseas ...	„	„
15th „ „ ...	S. S. "Clan Campbell."	„ ...	Colombo ...	London ...	2 S.-p.	„
20th „ „ ...	„ "Salsette" ...	„ ...	While in the	harbour ...	1 „	„
23rd „ „ ...	„ "Tadjoura" ...	French ...	Djibouti ...	Djibouti ...	1 „	„
27th „ „ ...	„ "Oceanien" ...	„ ...	Marseilles ...	Mauritius ...	2 C.-p.	On board.
9th April 1916 ...	H. T. "Taroba" ...	British ...	Bombay ...	Overseas ...	1 C.-p.	Landed.
13th June 1916 ...	S. S. "Salsette" ...	„ ...	While in the	harbour ...	1 S.-p.	„
16th September 1916.	„ "Mooltan" ...	„ ...	Sydney ...	London ...	4 Mls.	On board.
28th „ „	„ "Khiva" ...	„ ...	London ...	Bombay ...	4 Gr. Mls.	„
30th October „	„ "Arabia" ...	„ ...	Bombay ...	London ...	1 C.-p.	Landed.
23rd December 1916.	„ "Malwa" ...	„ ...	„ ...	„ ...	1 C.-p.	„

N. B.—Plg. stands for Plague, Mls. for Measles, S.-p. for Small-pox, C.-p. for Chicken-pox, and Gr. Mls. for German Measles.

IV.—The following are the names and other information regarding the pilgrim ships which passed through Aden during the year under report :—

No.	Date.	Names of vessels.	Nationality.	From	To	Number of		
						Pilgrims.	Cases of Infectious diseases.	Deaths.
1	3rd January 1916 ...	S.S. "Koweit" ...	British ...	Jeddah ...	Bombay ...	755	...	...
2	14th ,, ,, ...	,, "Akbar" ...	Do. ...	Do. ...	Do. ...	1,292	...	3
3	4th March ,, ...	,, "Akbar" ...	Do. ...	Do. ...	Do. ...	1,549	...	...
4	31st August ,, ...	,, "Akbar" ...	Do. ...	Do. ...	Do. ...	236	...	...
5	10th September 1916.	,, "Sardar" ...	Do. ...	Bombay ...	Jeddah ...	636	...	...
6	18th ,, ,, ...	,, "Nairung" ...	Do. ...	Do. ...	Do. ...	755	...	1
7	20th ,, ,, ...	,, "Hejaz" ...	Do. ...	Do. ...	Do. ...	911	...	...
8	10th October ,, ...	,, "Nairung" ...	Do. ...	Jeddah ...	Bombay ...	808	...	1
9	19th November ,, ...	,, "Jehangir" ...	Do. ...	Do. ...	Do. ...	1,309	...	3
10	5th December ,, ...	,, "Nairung" ...	Do. ...	Do. ...	Do. ...	1,019	...	...
11	27th ,, ,, ...	,, "Hejaz" ...	Do. ...	Do. ...	Do. ...	1,185	...	1

V.—Prevailing Diseases.

Malarial fever, diseases of respiratory and digestive system, ulcers, and local injuries.

Epidemics.—There were no epidemic. A few cases of Small-pox and Chicken-pox occurred sporadically in Tawahi during the months of February, March, April, June, July and September 1916.

Vaccination.—Vaccination with Bombay Glycerinated Vaccine was offered to all unvaccinated passengers and crews of dhows and ships on arrival. Also to a few coolies who were homeless.

VI.—Statement showing the number of cases treated at the Infectious Diseases Hospital, Maalla, during the year :—

Year.	Remaining as per last return.	Admissions.	Deaths.	Protected.	Unprotected.
1916 ...	1	30	3	20	10

Sources of Admission.

Shipping.	Steamer Point.	Maalla.	Crater.	Europeans.
16 ...	8	2	4	5 included

VII.—Statement showing the tubes received, their cost and the Vaccination Operations performed during the year at the Port and Tawahi :—

Number of tubes Bombay Municipality Vaccine.	Cost.	Total number of operations performed.	Result.	Remarks.
682	Rs. a. p. 170 8 0	1,581	All unknown.	

N.B.—It is impossible to have the results of vaccination operations recorded as those vaccinated are immigrants, who are vaccinated on landing, and a few coolies, who are homeless.

The vaccinations performed during the year are all nominally primary.

VIII.—Establishment.

Dr. John C. Young, M.B., C.M., D.T.M., held the appointment of Acting Health Officer of the Port, Aden, from 1st January to 31st December 1916.

Office Establishment.—Mr. H. C. DePenning, Clerk, from 1st January to 31st December 1916.

Peon Sayed Ibrahim from 1st January to 31st December 1916.

IX.—Launch Establishment.

1. Driver Hussein Noman from 1st January to 31st December 1916.

2. Succani Ahmed Suliman from 1st January to 31st March 1916 and was on leave pending retirement. He died on 26th May 1916.

3. Lascar Muhammad Magon was appointed to act as Succani from 1st April 1916 and was confirmed in that appointment on the 5th May 1916, where he has been at work ever since.

4. Stoker Baisher Hizam from 1st January to 31st May 1916 and on leave without pay from 1st June 1916.

Abdu Noman was appointed to act for him from 1st June to 31st December 1916.

5. Ali Magon was appointed to act for Lascar Md. Magon from 1st April 1916 and was confirmed in that appointment from 5th May 1916, where he has been at work ever since.

X.—Disinfecting Stove.

The services of the Firemen were maintained only for the care of the Disinfecting Stove during the year.

Port Health Office, Aden,
Dated the 18th January 1917.

JOHN C. YOUNG,
Acting Port Health Officer, Aden.

APPENDIX III.

The following table shows when the drainage systems and water-works were completed in the towns mentioned therein, with the average annual death-rate for the five-year period preceding the introduction and also the ratio for the five-year period ending with the year under report, exclusive of recorded plague mortality :—

The rural death-rates for each district are added for comparison.

District.	Táluka.	Town.	Date of completion of works of		Average annual death-rate for the five-year period ending with 1916 exclusive of plague.	Average annual death-rate for the five-year period preceding the introduction of drainage or water-supply or both.	Death-rate in rural circles for the year 1916.	Plague mortality in rural circles for the year 1916.
			Drainage.	Water-supply.				
1	2	3	4	5	6	7	8	9
.....	.....	Bombay	*a* 1879	*b* 1892	30·03	27·98	.....	.....
West Khándesh	Dhulia	Dhulia	.....	1896	24·62	32·50	38·12	1·48
Ahmednagar	Ahmednagar	Ahmednagar	.....	1897	26·54	55·65	54·73	20·91
Surat	Chorási	Surat	.....	1898	25·01	39·77	29·57	1·23
Ahmedabad	Daskroi	Ahmedabad	*c* 1893	1891	48·68	45·21	30·62	.....
Karáchi	Karáchi	Karáchi	*c* 1895	1894	36·74	35·15	9·18	.....
Sukkur	Sukkur	Sukkur	.....	1895	27·46	28·70	30·64	.....
Thána	Sálsette	Bándra	.....	1896	23·27	23·01	25·29	·44
Kolába	Panvel	Panvel	.....	1895	22·88	19·50	31·28	.....
Dhárwár	Hubli	Hubli	.....	1894	27·33	25·70	34·03	9·89
Ahmedabad	Viramgám	Viramgám	*d* 1893	.....	39·15	69·28	35·19	.....
East Khándesh	Jalgaon	Jalgaon	.....	1909	29·65	31·56	38·50	.....
Sholápur	Pandharpur	Pandharpur	.....	1911	45·88	49·98	51·38	16·31
Násik	Násik	Násik	.....	1913	32·67	52·73	34·24	1·15
Bijápur	Bijápur	Bijápur	.....	1913	21·43	30·08	43·47	15·22

a Drainage works commenced in 1879 are still in progress.

b Tánsa water-works completed in 1892. Besides these there are Vehár and Tulshi water-works.

c Drainage system partially introduced.

d In 1893 the gradient of the channel round the town was improved to carry away the sullage water that used to accumulate and stagnate round the town.

APPENDIX IV.

ANNUAL FORM No. I.—*Showing the Births registered in the Districts of the Bombay Presidency during the year 1916.*

1	2	3			4			5			6	7	8	9		
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1911.			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of Births over Deaths per 1,000 of Population.	Excess of Deaths over Births per 1,000 of Population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.				Male.	Female.	Total.
	Western Registration District.															
1	East Khándesh ..	521,546	512,668	1,034,214	24,265	22,854	47,119	23·46	22·10	45·56	106·17	8·27	..	25·90	24·49	50·39
2	West Khándesh ...	293,300	287,380	580,680	14,333	14,018	28,351	2·68	24·14	48·82	102·24	4·81	..	26·18	25·12	51·30
3	Násik	455,045	448,599	903,644	20,770	19,554	40,324	22·98	21·64	44·62	106·22	9·60	..	23·79	22·66	46·45
4	Thána	456,673	424,235	880,908	14,323	14,067	28,390	16·28	15·97	32·23	101·81	4·29	..	17·87	16·07	34·84
5	Kolába	295,085	298,972	594,057	11,107	10,695	21,802	18·69	18·00	36·69	103·85	7·91	..	20·35	19·27	39·62
6	City of Bombay ..	629,854	333,509	963,363	10,593	10,255	20,848	11·00	10·65	21·65	103·30	..	9·13	10·66	10·24	20·30
	Central Registration District.															
7	Ahmednagar	475,163	468,828	943,991	19,417	18,341	37,758	20·57	19·43	40·00	105·87	..	2·89	22·25	20·13	42·38
8	Poona	538,238	526,568	1,064,806	17,912	16,765	34,677	16·82	15·75	32·57	106·84	..	7·09	17·67	16·50	34·17
9	Sholápur	391,311	376,706	768,017	16,956	15,985	32,941	22·08	20·81	42·89	106·07	..	10·50	21·77	20·70	42·47
10	Sátára	538,841	541,957	1,080,798	22,299	21,091	43,390	20·63	19·51	40·14	105·73	4·73	..	20·09	19·03	39·12
11	Ratnágiri	553,368	650,234	1,203,602	20,198	18,980	39,178	16·73	15·77	32·55	106·42	9·72	..	17·19	16·18	33·37
	Southern Registration District.															
12	Belgaum	478,458	463,490	941,948	18,800	18,403	37,203	10·6	19·54	39·50	102·16	5·29	..	21·13	20·28	41·41
13	Dhárwár	519,995	505,091	1,025,086	20,146	19,522	39,668	19·65	19·04	38·70	103·20	3·97	..	19·97	19·16	39·13
14	Bijápur	433,866	429,061	862,927	17,303	16,994	34,297	20·05	19·69	39·74	101·82	1·15	..	20·14	19·48	39·62
15	Kánara	220,065	210,369	430,434	7,317	6,901	14,218	17·00	16·03	33·03	106·03	2·86	..	17·23	16·38	33·61
	Gujarát Registration District.															
16	Surat	326,839	327,135	653,974	13,996	13,954	27,950	21·40	20·42	41·82	104·81	11·87	..	19·09	18·13	37·22
17	Broach	158,219	148,448	306,667	7,600	7,200	14,800	24·78	23·48	48·26	105·56	11·33	..	23·37	21·83	45·20
18	Kaira	370,174	321,468	691,642	15,695	14,182	29,877	22·69	20·50	43·19	110·67	5·80	..	22·78	20·69	43·47
19	Panch Mahális ..	165,902	156,751	322,653	7,755	7,438	15,193	24·04	23·05	47·09	104·26	22·57	..	21·98	20·96	42·94
20	Ahmedabad	432,124	395,213	827,337	18,957	17,170	36,127	22·91	20·75	43·66	110·79	5·70	..	20·60	18·59	39·19
	Sind Registration District.															
21	Karáchi	290,390	225,943	516,333	6,999	6,175	13,174	13·55	11·96	25·51	113·34	..	2·78	12·59	10·76	23·36
22	Hyderabad	337,526	273,584	611,110	5,942	4,180	10,122	9·72	6·84	16·56	142·15	..	4·55	9·86	7·37	17·23
23	Thar and Párkar ..	241,274	192,091	433,365	4,640	3,738	8,378	10·71	8·63	19·33	124·13	..	4·55	11·92	9·48	21·40
24	Nawabshah	247,719	200,759	448,478	6,098	4,501	10,599	13 60	10·04	23·63	135·48	..	1·96	10·45	7·35	17·80
25	Lárkána	359,207	301,621	660,828	9,351	7,555	16,906	14·15	11·43	25·58	123·77	4·21	..	13·71	10·89	24·59
26	Sukkur	312,732	260,803	573,535	8,338	6,660	14,998	14·54	11·61	26·15	125·20	2·90	..	13·48	10·87	24·34
27	Upper Sind Frontier..	145,541	117,445	262,986	3,947	3,037	6,984	15·01	11·55	26·56	129·96	8·87	..	11·86	9·35	21·30
	Total for the Presidency ..	10,188,455	9,398,928	19,587,383	365,057	339,615	704,672	18·64	17·34	35·98	107·49	2·66	..	18·72	17·37	36·09

ANNUAL FORM NO. II.—*Showing the* BIRTHS *and* DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1916.*

1	2	3	4	5			6		7			8
Number.	Districts.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS 1911).			BIRTHS.		NUMBER OF DEATHS REGISTERED.			Number of Deaths of males to every 100 Deaths of females.
				Male.	Female.	Total.	Total Number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.	
	Western Registration District.											
1	East Khándesh	4,550	227	521,546	512,668	1,034,214	47,119	45·56	19,077	18,582	38,559	107·50
2	West Khándesh	5,439	106	293,300	287,380	580,680	28,351	48·82	13,052	12,448	25,500	104·85
3	Násik	5,878	154	455,045	448,599	903,644	40,324	44·62	18,595	17,416	36,011	106·77
4	Thána	3,576	246	456,673	424,235	880,908	28,390	32·23	12,793	11,819	24,612	108·24
5	Kolába	2,169	274	295,085	298,972	594,057	21,802	36·69	8,767	8,335	17,102	105·18
6	City of Bombay	22·5	41,483	629,854	333,509	963,363	20,848	21·65	16,851	12,813	29,664	131·51
	Central Registration District.											
7	Ahmednagar...	6,613	142	475,163	468,828	943,991	37,758	40·00	20,248	20,236	40,484	100·06
8	Poona	5,366	198	538,238	526,568	1,064,806	34,677	32·57	21,395	20,834	42,229	102·69
9	Sholápur	4,556	169	391,311	376,706	768,017	32,941	42·89	20,587	20,420	41,007	100·81
10	Sátára	4,818	224	538,841	541,957	1,080,798	43,390	40·14	19,287	18,993	38,280	101·55
11	Ratnágiri	3,989	302	553,368	650,234	1,203,602	39,178	32·55	13,833	13,643	27,476	101·39
	Southern Registration District.											
12	Belgaum	4,613	204	478,458	463,490	941,948	37,203	39·50	16,253	15,970	32,223	101·77
13	Dhárwár	4,604	223	519,995	505,091	1,025,086	39,668	38·70	17,756	17,846	35,602	99·50
14	Bijápur	5,707	151	433,866	429,061	862,927	34,297	39·74	16,598	16,709	33,307	99·34
15	Kánara	3,946	109	220,065	210,369	430,434	14,218	33·03	6,629	6,359	12,988	104·25
	Gujarát Registration District.											
16	Surat	1,651	396	326,839	327,135	653,974	27,350	41·82	9,920	9,668	19,588	102·61
17	Broach	1,468	209	158,219	148,448	306,667	14,800	48·26	5,743	5,582	11,325	102·88
18	Kaira	1,596	433	370,174	321,468	691,642	29,877	43·19	13,398	12,465	25,863	107·48
19	Panch Mahális	1,606	201	165,902	156,751	322,653	15,193	47·09	3,997	3,915	7,912	102·09
20	Ahmedabad	3,824	216	432,124	395,213	827,337	36,127	43·66	16,136	15,270	31,406	105·78
	Sind Registration District.											
21	Karáchi	11,782	44	290,390	225,943	516,333	13,174	25·51	7,787	6,820	14,607	114·18
22	Hyderabad	4,417	138	337,526	273,584	611,110	10,122	16·56	7,136	5,765	12,901	123·78
23	Thar and Párkar	13,638	32	241,274	192,091	433,365	8,378	19·33	5,583	4,767	10,350	117·12
24	Nawabshah	3,867	116	247,719	200,759	448,478	10,599	23·63	6,265	5,212	11,477	120·20
25	Lárkána	5,053	131	359,207	301,621	660,828	16,906	25·58	7,410	6,715	14,125	110·35
26	Sukkur	5,535	103	312,732	260,803	573,535	14,998	26·15	7,067	6,269	13,336	112·73
27	Upper Sind Frontier ...	2,644	99	145,541	117,445	262,986	6,984	26·56	2,482	2,169	4,651	114·43
	Total for the Presidency ...	122,978	159	10,188,455	9,398,928	19,587,383	704,672	35·98	335,545	317,040	652,585	105·84

1	2	9										10		
Number.	Districts.	DEATHS PER 1,000 OF POPULATION FROM							All causes.			MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	Male.	Female.	Total.	Male.	Female.	Total.
	Western Registration District.														
1	East Khándesh	2·84	·03	·35	15·63	1·49	4·87	·23	11·34	38·31	36·24	37·28	36·09	34·81	35·45
2	West Khándesh	4·36	·12	7·18	15·73	·64	3·73	·31	11·84	44·50	43·30	43·91	32·93	31·81	32·37
3	Násik	2·21	·49	5·37	13·38	1·36	4·62	·38	12·04	40·86	38·82	39·85	37·66	36·64	37·15
4	Thána	·41	·15	·53	18·37	·92	1·22	·54	5·80	28·01	27·86	27·94	26·03	25·99	26·00
5	Kolába	·82	·18	·27	16·28	1·66	1·87	·48	7·23	29·71	27·87	28·79	29·06	27·10	28·08
6	City of Bombay	·13	1·01	2·06	2·11	2·40	11·29	·61	11·15	26·75	38·42	30·79	8·07	42·58	23·09
	Central Registration District.														
7	Ahmednagar	2·13	·03	10·97	10·65	2·90	4·96	·31	10·95	42·61	43·16	42·89	31·66	29·41	30·25
8	Poona	·66	·33	10·28	12·34	3·00	4·53	·39	8·13	39·75	39·57	39·66	31·04	29·70	30·37
9	Sholápur	1·56	·07	13·25	15·60	3·81	2·30	·43	11·39	52·61	54·21	53·39	34·55	34·66	34·61
10	Sátára	·65	·05	7·92	12·60	2·91	2·24	·52	8·52	35·79	35·05	35·41	29·29	27·95	28·98
11	Ratnágiri	·05	·41	·28	10·52	2·45	3·82	·43	4·86	25·00	20·98	22·82	23·53	20·02	21·63
	Southern Registration District.														
12	Belgaum	1·19	·01	6·55	6·15	3·37	3·18	·54	13·21	33·98	34·45	34·21	32·90	33·81	33·34
13	Dhárwár	·01	·01	7·59	8·05	1·22	4·23	·37	13·26	34·15	35·33	34·73	33·70	39·31	39·00
14	Bijápur	·82	·00	8·34	11·52	2·48	3·36	·38	11·19	38·26	38·94	38·59	2·72	32·71	32·70
15	Kánara	·10	·36	·15	13·72	2·15	1·52	·49	12·78	30·12	30·23	30·17	0·82	30·15	30·49
	Gujarát Registration District.														
16	Surat	·18	·08	1·18	10·34	1·05	9·87	·39	6·36	30·35	29·55	29·95	29·72	28·91	29·32
17	Broach	·76	·07	·07	16·38	1·22	8·13	·45	9·85	36·07	37·60	36·93	33·90	34·99	34·42
18	Kaira	3·46	·03	·19	11·81	1·44	9·53	·57	10·36	36·19	38·78	37·39	30·85	32·98	31·84
19	Panch Mahális	1·04	·01	·03	16·26	·32	1·35	·42	5·09	24·09	24·98	24·52	20·81	21·32	21·06
20	Ahmedabad	·82	·24	·06	16·32	1·61	8·81	·46	9·64	37·34	38·64	37·96	34·72	36·00	35·33
	Sind Registration District.														
21	Karáchi	1·57	·03	·23	15·35	·70	2·39	·45	7·57	26·82	30·18	28·29	20·73	21·3	20·99
22	Hyderabad	·55	·00	·06	16·87	·52	1·24	·26	1·62	21·14	21·07	21·12	16·69	15·99	16·37
23	Thar and Párkar	·00	·02	·00	21·18	·23	1·19	·21	1·05	23·14	24·82	23·88	17·42	17·73	17·56
24	Nawabshah	·12	·00	·01	24·03	·12	·82	·37	·63	25·29	25·96	25·59	14·97	14·83	14·91
25	Lárkána	·01	·00	·00	20·15	·05	·06	·35	·76	20·64	22·26	21·37	19·49	20·21	19·82
26	Sukkur	·05	·02	·02	19·90	·12	·29	·30	2·57	22·60	24·04	23·25	18·76	19·86	19·26
27	Upper Sind Frontier ...	·00	·00	·00	16·22	·19	·33	·27	·68	17·05	18·47	17·69	13·75	14·70	14·17
	Total for the Presidency...	1·01	·17	4·08	13·40	1·75	4·08	·41	8·44	32·93	33·73	33·32	28·88	29·32	29·09

ANNUAL FORM No. III.—DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1916.*

1	2	3												4	5
No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total Deaths registered during the year.	No.
	Western Registration District.														
1	East Khándesh	2,634	2,369	3,085	3,206	3,767	2,077	3,671	5,103	3,417	3,100	2,949	3,181	38,559	1
2	West Khándesh	1,647	1,471	2,260	1,761	2,106	1,346	2,080	2,515	2,037	2,086	2,058	3,483	25,500	2
3	Násik	3,856	2,819	2,499	2,435	2,762	2,412	3,115	4,193	2,904	2,370	3,008	3,639	36,011	3
4	Thána	2,832	2,519	2,516	1,853	1,636	1,503	1,465	2,031	1,779	1,773	2,277	2,388	24,612	4
5	Kolába	1,756	1,554	1,546	1,327	1,037	1,075	1,313	1,585	1,494	1,306	1,331	1,717	17,102	5
6	City of Bombay	2,376	2,602	3,551	3,473	2,724	2,018	2,234	2,212	2,064	2,103	2,067	2,280	29,664	6
	Central Registration District.														
7	Ahmednagar	1,975	1,833	2,117	1,869	2,161	2,272	3,632	5,238	4,784	5,134	4,754	4,715	40,484	7
8	Poona	2,515	2,125	2,176	2,155	2,414	2,341	2,996	4,141	4,379	5,383	5,483	6,121	42,229	8
9	Sholápur	4,463	3,526	2,331	1,419	1,555	1,359	2,610	4,232	3,694	3,835	5,017	6,716	41,007	9
10	Sátára	3,084	2,460	2,321	1,957	2,085	2,249	2,923	4,212	4,004	4,103	4,046	4,846	38,280	10
11	Ratnágiri	2,560	2,310	2,408	2,281	2,094	2,138	2,340	2,414	2,044	2,068	2,174	2,650	27,476	11
	Southern Registration District.														
12	Belgaum	2,835	2,715	2,447	1,928	1,896	1,880	2,293	2,847	2,806	2,789	3,276	4,511	32,223	12
13	Dhárwár	3,353	2,823	2,519	2,225	2,175	1,928	2,157	2,861	3,049	3,361	3,959	4,892	35,602	13
14	Bijápur	2,566	2,077	1,750	1,415	1,512	1,620	2,400	3,451	3,460	3,795	4,378	4,893	33,807	14
15	Kánara	1,465	1,290	1,054	848	899	946	1,017	1,141	1,093	939	1,037	1,269	12,988	15
	Gujarát Registration District.														
16	Surat	1,714	1,923	2,151	1,603	1,503	1,374	1,434	1,504	1,216	1,361	1,650	2,105	19,588	16
17	Broach	778	893	1,006	901	933	795	1,306	1,074	848	885	973	933	11,325	17
18	Kaira	1,565	1,640	2,100	2,080	1,981	1,826	3,799	3,097	2,094	2,077	1,986	1,627	25,863	18
19	Panch Mahals	591	542	673	631	541	437	709	980	729	710	786	593	7,912	19
20	Ahmedabad...	2,520	3,115	3,337	2,700	2,094	1,700	2,290	3,218	2,809	2,698	2,466	2,459	31,406	20
	Sind Registration District.														
21	Karáchi	1,262	1,263	1,141	900	957	704	602	834	1,327	2,357	1,920	1,435	14,607	21
22	Hyderabad	1,487	1,223	1,197	885	820	672	496	614	874	1,714	1,612	1,318	12,901	22
23	Thar and Párkar	1,507	1,278	1,040	837	656	511	375	353	570	931	1,161	1,131	10,350	23
24	Nawabshah	1,511	1,323	1,139	853	768	609	419	422	643	990	1,540	1,255	11,477	24
25	Lárkána	1,678	1,226	1,210	863	851	713	597	681	951	1,372	2,256	1,727	14,125	25
26	Sukkur	1,329	1,169	1,175	1,120	1,023	817	622	628	877	1,344	1,736	1,490	13,336	26
27	Upper Sind Frontier ...	512	392	366	290	335	279	183	198	310	514	716	556	4,651	27
	Total for the Presidency...	56,561	51,489	51,160	43,775	43,391	37,591	49,419	61,760	56,306	60,988	67,216	73,929	652,585	
	Ratio of deaths per 1,000 in each month	2·89	2·58	2·61	2·24	2·22	1·92	2·52	3·15	2·88	3·11	3·43	3·77	33·32	

ANNUAL FORM NO. IV.—DEATHS *registered according to* AGE IN THE

1	2	3		4		5		6	
No.	Districts.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.								
1	East Khándesh	5,720	4,710	4,433	4,527	861	862	536	523
2	West Khándesh	2,993	2,524	2,458	2,653	1,035	1,049	712	683
3	Násik	4,761	3,911	3,603	3,656	1,244	1,243	813	867
4	Thána	2,485	2,295	2,221	2,350	747	727	362	347
5	Kolába	1,940	1,681	1,656	1,724	394	382	176	185
6	City of Bombay	4,307	3,854	1,788	1,785	530	512	583	514
	Central Registration District.								
7	Ahmednagar	4,639	3,819	3,406	3,235	1,235	1,542	791	982
8	Poona	4,228	3,583	4,027	3,706	1,394	1,573	1,070	1,193
9	Sholápur	3,951	3,310	4,126	4,120	1,314	1,431	1,180	1,327
10	Sátára	4,199	3,453	3,597	3,679	1,401	1,416	945	952
11	Ratnágiri	2,257	1,882	2,086	2,153	632	630	330	320
	Southern Registration District.								
12	Belgaum	2,903	2,465	2,780	3,001	1,360	1,543	843	886
13	Dhárwár	3,380	2,786	2,940	3,069	1,364	1,579	1,005	1,200
14	Bijápur	2,906	2,474	2,972	3,117	1,262	1,431	773	839
15	Kánara	1,684	1,422	632	667	192	225	116	121
	Gujarát Registration District.								
16	Surat	2,729	2,497	1,694	1,665	553	610	280	285
17	Broach	1,826	1,602	1,431	1,448	264	271	88	92
18	Kaira	3,358	3,303	3,383	3,158	621	542	381	312
19	Panch Maháls	1,065	986	950	931	291	266	96	90
20	Ahmedabad	4,433	4,164	4,168	4,118	663	588	315	322
	Sind Registration District.								
21	Karáchi	2,138	1,915	1,397	1,457	455	415	222	222
22	Hyderabad	1,373	1,132	1,116	1,135	311	345	234	177
23	Thar and Párkar	891	873	813	788	283	303	157	133
24	Nawabshah	1,156	1,019	833	727	371	276	254	153
25	Lárkána	1,511	1,440	894	856	415	388	258	221
26	Sukkur	1,835	1,604	1,128	1,066	341	320	163	162
27	Upper Sind Frontier ...	660	600	360	347	152	120	77	63
	Total for the Presidency ...	75,328	65,304	60,892	61,138	19,685	20,589	12,715	13,171
	Population according to Census of 1911	333,992	333,705	1,033,360	1,066,128	1,286,872	1,204,044	1,129,222	893,170
	Ratios per 1,000 living ...	225·54	195·69	58·93	57·34	15·30	17·10	11·26	14·75

DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1916.*

7		8		9		10		11		12		13
15 and under 20.		20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
447	494	1,013	1,286	1,300	1,172	1,321	992	1,289	1,045	3,057	2,971	1
397	514	1,077	1,176	1,235	1,087	1,003	731	841	623	1,301	1,408	2
471	631	1,303	1,547	1,592	1,447	1,403	978	1,261	916	2,144	2,220	3
326	355	1,048	1,274	1,417	1,159	1,298	789	1,176	831	1,713	1,692	4
231	329	727	898	841	639	958	621	916	860	928	1,016	5
1,149	912	2,923	1,858	1,989	943	1,315	618	1,147	624	1,170	1,193	6
767	1,128	1,774	2,098	1,608	1,652	1,709	1,415	1,847	1,766	2,472	2,599	7
641	858	1,809	2,111	1,900	1,789	1,757	1,437	1,477	1,174	3,092	3,410	8
989	1,182	1,884	1,990	1,629	1,696	1,550	1,474	1,461	1,323	2,503	2,567	9
573	789	1,374	1,678	1,539	1,547	1,500	1,170	1,415	1,229	2,744	3,080	10
443	496	1,198	1,316	1,011	1,088	1,103	871	1,608	1,362	3,165	3,525	11
573	567	1,335	1,574	1,400	1,310	1,317	1,024	1,358	1,033	2,334	2,567	12
624	740	1,633	2,027	1,427	1,531	1,502	1,204	1,449	1,246	2,432	2,464	13
561	647	1,405	1,558	1,215	1,293	1,408	1,214	1,476	1,236	2,620	2,900	14
150	252	575	760	779	638	799	505	648	569	1,054	1,200	15
262	319	691	952	754	803	748	589	807	497	1,402	1,451	16
68	84	303	409	335	389	362	317	396	291	670	679	17
256	215	872	896	951	916	1,002	793	985	726	1,589	1,604	18
82	93	248	319	247	290	282	189	314	221	422	530	19
390	377	1,175	1,210	1,172	1,079	1,231	889	1,184	980	1,405	1,543	20
205	266	759	725	773	546	629	345	427	282	782	647	21
287	238	811	765	813	613	802	455	623	355	766	550	22
216	163	684	648	696	573	612	394	564	312	667	580	23
237	260	646	811	794	636	695	469	584	347	695	514	24
280	325	791	1,022	857	800	830	536	621	376	953	751	25
216	273	586	739	626	603	715	415	565	364	857	723	26
75	56	171	251	211	169	188	142	214	133	374	288	27
10,916	12,563	28,865	31,898	29,111	26,408	28,039	20,576	26,653	20,721	43,341	44,672	
852,854	752,848	1,903,139	1,801,211	1,562,195	1,370,275	1,064,455	949,249	611,654	564,582	436,814	476,708	
12·80	16·69	15·17	17·71	18·63	19·27	26·34	21·68	43·57	36·70	99·22	93·71	

ANNUAL FORM No. V.—DEATHS *registered according to* CLASSES

1	2	3						
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1911.						
		Mahomedans.	Hindus.	Jains.	Christians.	Pársis.	Other Classes.	Total.
	Western Registration District.							
1	East Khándesh	99,521	902,131	9,361	748	371	22,082	1,034,214
2	West Khándesh	31,323	474,200	3,796	586	233	70,542	580,680
3	Násik	47,705	843,705	7,902	1,867	840	1,625	903,644
4	Thána	41,979	786,925	2,985	43,341	5,105	573	880,908
5	Kolába	28,876	560,266	1,411	1,149	303	2,052	594,057
6	City of Bombay	179,346	664,042	20,460	41,273	50,931	7,311	963,363
	Central Registration District.							
7	Ahmednagar	47,959	855,676	15,284	23,622	222	1,228	943,991
8	Poona	48,936	991,738	11,731	8,280	2,695	1,476	1,064,806
9	Sholápur	55,377	703,215	7,643	1,412	334	36	768,017
10	Sátára	36,688	1,028,176	14,883	815	209	27	1,080,798
11	Ratnágiri	85,303	1,110,594	1,913	5,678	46	68	1,203,602
	Southern Registration District.							
12	Belgaum	77,075	817,797	41,533	5,313	159	71	941,948
13	Dhárwár	136,943	872,885	10,413	4,526	218	101	1,025,086
14	Bijápur	101,069	757,542	3,235	1,052	28	1	862,927
15	Kánara	28,731	383,624	1,251	16,729	14	85	430,434
	Gujarát Registration District.							
16	Surat	55,394	571,834	9,821	1,050	11,783	4,092	653,974
17	Broach	67,752	192,964	3,053	1,052	2,770	39,076	306,667
18	Kaira	63,280	598,165	6,609	23,490	81	17	691,642
19	Panch Mahals	22,273	274,339	1,542	1,810	204	22,485	322,653
20	Ahmedabad	92,018	693,209	35,899	3,584	1,639	988	827,337
	Sind Registration District.							
21	Karáchi	396,334	111,748	650	3,625	2,202	1,774	516,333
22	Hyderabad	1,035,437	442,801	695	248	102	13,670	611,110
23	Thar and Párkar ...							433,365
24	Nawabshah							448,478
25	Lárkána	557,517	101,687	1	21	6	1,596	660,828
26	Sukkur	414,671	155,156	3	207	96	3,402	573,535
27	Upper Sind Frontier	235,970	26,495	...	10	5	506	262,986
	Total of the Presidency ...	3,987,477	14,920,914	212,074	191,438	80,596	194,884	19,587,383

N.B.—This and all the other statements refer to Natives only and not to Europeans. "Hindus"

in the BOMBAY PRESIDENCY *during the year 1916.*

4							5						
NUMBER OF DEATHS REGISTERED.							RATIO OF DEATHS PER 1,000 OF POPULATION.						
Mahomedans.	Hindus.	Jains.	Christians.	Pársis.	Other Classes.	Total.	Mahomedans.	Hindus.	Jains.	Christians.	Pársis.	Other Classes.	Total.
3,143	35,373	7	21	12	3	38,559	31·58	39·21	·74	28·07	32·18	·13	37·28
1,295	24,178	12	14	...	1	25,500	41·34	50·99	3·16	23·89	...	·01	40·91
3,347	32,581	28	34	·14	7	36,011	70·16	38·62	3·54	18·21	16·67	4·31	39·85
1,115	22,433	12	970	63	19	24,612	26·56	27·24	4·02	22·38	12·34	33·16	27·94
749	16,267	3	32	2	49	17,102	25·90	29·03	2·13	27·85	6·60	23·88	28·79
6,513	19,438	1,271	1,238	979	225	29,664	36·31	29·27	62·12	29·97	19·22	30·77	30·79
2,205	38,114	39	126	...	...	40,484	45·94	44·54	2·55	5·33	...	...	42·89
2,415	39,575	24	161	39	15	42,229	49·35	39·90	2·05	19·56	14·47	10·16	39·66
2,242	38,618	135	10	1	1	41,007	40·49	54·92	17·66	7·08	2·99	27·78	53·39
1,216	36,744	312	3	4	1	38,280	33·14	35·74	20·96	3·68	19·14	37·04	35·41
2,186	25,181	16	92	...	1	27,476	25·63	22·67	8·36	16·27	...	14.71	22·82
2,407	28,507	1,175	131	1	2	32,223	31·23	34·86	28·29	24·66	6·29	28·17	34·21
4,929	30,202	356	111	4	...	35,602	35·99	34·60	34·19	24·53	18·35	...	34·73
3,676	29,537	68	25	1	...	33,307	36·37	38·99	21·02	23·76	35·71	...	38·59
663	11,861	42	422	...	...	12,988	23·08	30·92	33·57	25·23	...	...	30·17
1,755	15,304	181	27	235	2,086	19,588	31·68	26·76	18·43	25·71	19·94	509·78	29·95
2,420	7,396	39	16	68	1,386	11,325	35·72	38·33	12·77	15·21	24·55	35·47	36·93
2,214	23,249	135	257	...	8	25,863	34·99	38·87	5·30	10·94	...	475·88	37·39
513	5,315	33	11	5	2,035	7,912	23·03	19·37	21·40	6·08	24·51	90·50	24·52
3,679	26,528	869	96	33	201	31,406	39·98	38·27	24·21	26·79	20·13	203·44	37·96
9,357	5,096	...	104	37	13	14,607	23·61	45·60	...	28·69	16·80	7·33	28·29
8,160	4,685	1	4	1	50	12,901							21·12
5,165	5,137	3	...	...	45	10,350	21·01	29·07	5·75	16·13	9·80	6·95	23·88
8,428	3,049	...	...	...	...	11,477							25·59
11,555	2,570	...	...	...	...	14,125	20·73	25·27	...	...	...	...	21·37
8,122	5,185	1	9	3	16	13,336	19·59	33·42	333·33	43·78	31·25	4·70	23·25
4,014	637	...	...	...	...	4,651	17·01	24·01	...	...	...	...	17·69
103,483	532,760	4,762	3,914	1,502	6,164	652,585	25·95	35·71	22·45	20·44	18·63	31·63	33·32

includes Hindus of all castes. "Other Classes" include Buddhists, Sikhs, Jews and all others.

ANNUAL FORM No. VI.—DEATHS *registered from* DIFFERENT CAUSES *in the*

1	2	3	4	5	6	7	8	9	10		
									Inju		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	A.—DISTRICTS.										
	Western Registration District.										
1	East Khándesh ...	903,053	2,504	22	642	14,639	1,368	4,381	4	9	151
2	West Khándesh ...	538,084	2,425	68	3,516	8,885	325	1,981	9	6	98
3	Násik	813,511	1,679	66	2,590	11,446	1,025	3,698	8	6	223
4	Thána	791,861	353	90	232	15,375	660	910	27	15	220
5	Kolába	567,043	440	87	130	9,483	944	1,043	11	11	170
	Central Registration District.										
6	Ahmednagar ...	888,096	1,983	22	8,953	9,763	2,611	4,294	6	11	193
7	Poona	859,267	637	98	6,500	11,818	2,362	3,141	5	10	265
8	Sholápur	660,338	1,010	56	10,968	10,342	2,159	1,382	8	4	212
9	Sátára	1,025,700	696	54	8,123	13,253	3,051	2,239	11	8	367
10	Ratnágiri	1,136,710	57	456	131	12,048	2,812	4,280	9	7	253
	Southern Registration District.										
11	Belgaum	869,243	986	12	5,633	5,598	3,027	2,689	15	17	384
12	Dhárwár	885,871	6	9	6,206	7,577	932	3,274	19	24	246
13	Bijápur	792,582	539	1	7,127	9,668	2,014	2,570	16	11	235
14	Kánara	382,278	...	119	57	5,182	797	564	11	2	169
	Gujarát Registration District.										
15	Surat	512,580	91	49	229	6,469	327	4,659	12	9	143
16	Broach	242,979	106	20	13	4,591	300	1,669	1	3	66
17	Kaira	594,309	1,765	16	115	6,792	763	5,463	8	18	191
18	Panch Maháls ...	291,248	188	2	6	4,782	89	407	3	...	69
19	Ahmedabad ...	568,530	183	110	...	11,351	566	2,215	9	11	151
	Sind Registration District.										
20	Karáchi	351,401	496	13	4	5,637	68	95	1	2	81
21	Hyderabad... ...	523,747	241	2	32	8,861	156	173	2	2	65
22	Thar and Párkar ...	424,563	...	8	...	8,787	96	387	3	1	41
23	Nawábsháh ...	436,579	35	...	2	10,505	50	126	1	1	105
24	Lárkána	628,336	1	...	...	12,489	28	25	10	4	135
25	Sukkur	468,207	16	5	...	8,994	42	51	4	3	90
26	Upper Sind Frontier.	251,646	...	...	...	4,062	46	74	1	4	48
	Total of Districts ...	16,407,762	16,437	1,385	61,209	238,397	26,618	51,790	214	199	4,371
	B.—TOWNS.										
	East Khándesh District.										
1	Jalgaon	17,195	28	1	18	184	31	76	1	...	2
2	Bhusáwal	18,312	43	11	13	204	31	82	...	...	8
3	Chopda	17,008	94	...	10	218	5	67	...	1	2
4	Dharangaon ...	15,607	64	...	4	99	15	115	...	...	6
5	Párola	14,177	22	...	75	178	17	84	...	...	6
6	Amalner	13,232	95	...	108	167	12	4	...	...	4
7	Erandol	13,144	22	...	3	234	8	58	...	...	7

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1916.*

			11	12	13										14
ness.					RATIO OF DEATHS PER 1,000 OF POPULATION.										
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all Causes. For the year.	From all Causes. Mean of previous five years.	No.
13	22	199	10,573	34,328	2·78	·02	·71	16·21	1·51	4·85	·22	11·71	38·01	36·13	1
41	11	165	6,477	23,842	4·51	·12	6·53	16·51	·60	3·68	·31	12·04	44·30	32·89	2
49	10	296	9,860	30,660	2·06	·08	3·19	14·07	1·26	4·55	·36	12·12	37·69	37·09	3
150	18	430	4,174	22,224	·45	·11	·29	19·42	·83	1·15	·54	5·27	28·06	25·77	4
71	6	269	4,083	16,479	·78	·15	·23	16·72	1·67	1·84	·47	7·20	29·06	28·13	5
53	9	272	9,597	37,495	2·23	·02	10·08	10·99	2·94	4·84	·31	10·81	42·22	30·75	6
53	12	345	6,443	31,344	·74	·11	7·57	13·75	2·75	3·66	·40	7·50	36·48	29·03	7
31	6	261	6,686	32,864	1·53	·08	16·61	15·66	3·27	2·09	·40	10·12	49·76	31·36	8
128	25	539	8,803	36,758	·68	·05	7·92	12·92	2·97	2·18	·53	8·58	35·83	28·65	9
205	10	484	5,503	25,771	·05	·40	·11	10·60	2·47	3·77	·43	4·84	22·67	21·77	10
48	9	473	11,693	30,111	1·13	·01	6·48	6·44	3·48	3·09	·54	13·45	34·64	33·61	11
34	4	327	11,554	29,885	·01	·01	7·01	8·55	1·05	3·70	·37	13·04	33·74	39·25	12
33	...	295	8,634	30,848	·68	·00	8·99	12·20	2·54	3·24	·37	10·89	38·92	32·33	13
16	2	200	4,973	11,892	...	·31	·15	13·56	2·08	1·48	·52	13·01	31·11	31·35	14
41	4	209	2,628	14,661	·18	·09	·45	12·62	·64	9·09	·41	5·12	28·60	30·22	15
25	10	105	2,122	8,926	·44	·08	·05	18·90	1·23	6·87	·43	8·73	36·73	35·03	16
61	34	312	5,586	20,812	2·97	·02	·19	11·43	1·28	9·20	·52	9·40	35·01	31·12	17
49	5	126	1,376	6,976	·65	·01	·02	16·42	·30	1·40	·43	4·72	23·95	20·54	18
81	35	287	2,466	17,178	·32	·19	...	19·96	1·00	3·90	·50	4·34	30·21	31·17	19
40	4	128	427	6,868	1·41	·04	·01	16·04	·19	·27	·36	1·22	19·54	13·06	20
56	1	126	341	9,932	·46	·00	·06	16·92	·30	·33	·24	·65	18·96	14·08	21
42	...	87	433	9,798	...	·02	...	20·70	·23	·91	·20	1·02	23·08	17·10	22
55	2	164	243	11,125	·08	...	·00	24·06	·11	·29	·38	·56	25·48	14·93	23
70	2	221	261	13,025	·00	...	...	19·88	·04	·04	·35	·42	20·73	19·51	24
33	...	130	223	9,461	·03	·01	...	19·21	·09	·11	·28	·48	20·21	16·32	25
14	1	68	97	4,347	...	...	...	16·14	·18	·29	·27	·39	17·27	13·67	26
1,492	242	6,518	125,256	527,610	1·00	·08	3·73	14·53	1·62	3·16	·40	7·63	32·15	28·03	
1	...	4	182	524	1·63	·06	1·06	10·70	1·80	4·42	·23	10·57	30·47	30·76	1
...	...	8	195	587	2·34	·61	·71	11·14	1·69	4·48	·43	10·65	32·05	33·29	2
1	...	4	120	518	5·53	...	·59	12·81	·29	3·94	·23	7·05	30·45	20·52	3
...	...	6	165	468	4·10	...	·26	6·34	·96	7·37	·39	10·57	29·99	24·86	4
...	...	6	144	526	1·55	...	5·29	12·55	1·20	5·93	·42	10·16	37·10	27·43	5
...	...	4	42	469	7·18	...	8·16	12·62	·91	3·10	·30	3·17	35·44	27·58	6
...	...	7	110	442	1·67	...	·23	17·80	·61	4·41	·53	8·37	33·62	30·28	7

1	2	3	4	5	6	7	8	9	10		
									Injur		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	B.—TOWNS—*continued.*										
	East Khándesh—District—continued.										
8	Nasirabad	13,033	26	...	...	80	52	101	...	...	2
9	Chálisgaon	9,453	38	...	4	157	9	37	...	...	1
	West Khándesh District.										
10	Dhulia	30,757	51	...	246	169	16	156	1	...	12
11	Nandurbár... ...	11,839	55	...	409	81	33	27	...	...	3
	Násik District.										
12	Násik	33,163	31	43	221	125	96	197	2	...	16
13	Yeola	16,275	1	1	512	123	38	145	...	...	4
14	Málegaon	19,542	257	327	1,264	235	27	51	...	...	4
15	Igatpurí	8,380	...	1	60	63	6	33	1	...	6
16	Manmád	6,947	14	...	149	67	18	20	...	...	6
17	Trimbak	4,078	2	1	62	16	7	19	...	...	...
18	Deoláli Cantonment.	1,748	16	...	...	14	14	9	...	...	...
	Thána District.										
19	Thána	15,591	2	4	39	126	33	37	1	2	10
20	Bándra	22,885	3	25	55	73	42	32	...	1	7
21	Kurla	15,081	...	8	64	200	24	13	...	...	3
22	Bhiwandi	13,292	...	...	35	154	21	16	...	...	2
23	Kalyán	12,600	...	1	39	163	17	60	...	...	6
24	Bassein	9,598	...	1	...	95	12	9	...	...	6
	Kolába District.										
25	Alibág	3,358	15	...	29	21	27	13	...	...	...
26	Panvel	7,744	...	11	3	56	10	30	...	...	1
27	Mahád	7,164	30	10	...	64	2	17	1	...	4
28	Uran	8,748	...	...	...	49	5	6	...	...	4
29	City of Bombay ...	963,363	123	1,008	1,982	2,032	2,307	10,882	43	18	515
	Ahmednagar District.										
30	Ahmednagar ...	33,878	17	5	1,216	116	90	316	2	...	11
31	Sangamner... ...	14,269	9	...	10	103	15	33	...	...	1
32	Ahmednagar Cantonment.	7,748	...	...	173	68	26	43	...	...	...
	Poona District.										
33	Poona	126,201	37	246	3,825	770	616	1,269	1	...	36
34	Bárámati	10,190	18	...	98	68	52	51	...	...	3
35	Khed	8,056	1	2	119	45	10	22	...	...	4

No. VI—*continued.*

RIES.			11	12	13										14
					Ratio of Deaths per 1,000 of Population.								From all Causes.		
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	For the year.	Mean of previous five years.	No.
1	...	3	130	392	1·99	...	...	6·14	3·99	7·75	·23	9·97	30·07	38·44	8
1	...	2	58	305	4·02	...	·42	16·61	·95	3·91	·21	6·14	32·26	28·31	9
...	...	13	278	929	1·66	...	8·00	5·50	·52	5·07	·42	9·03	30·20	24·93	10
1	...	4	120	729	4·65	...	34·55	6·84	2·79	2·28	·33	10·13	61·57	28·21	11
3	4	25	483	1,221	·94	1·29	6·66	3·80	2·89	5·94	·74	14·56	36·82	42·03	12
...	...	4	170	994	·06	·06	31·41	7·56	2·33	8·91	·25	10·45	61·06	30·97	13
1	...	5	161	2,317	13·15	16·73	64·68	12·03	1·38	2·61	·26	8·24	119·08	41·24	14
...	...	7	70	240	...	·12	7·16	7·52	·72	3·94	·83	8·35	28·64	29·44	15
...	...	6	42	316	2·02	...	21·44	9·65	2·59	2·88	·86	6·05	45·49	29·17	16
...	...	...	48	155	·49	·25	15·20	3·92	1·72	4·66	...	11·77	38·01	27·62	17
...	...	...	45	98	9·15	...	...	8·01	8·01	5·15	...	25·74	56·06	37·76	18
...	1	14	271	526	·13	·26	2·50	8·08	2·12	2·37	·90	17·38	33·74	32·07	19
...	...	8	272	510	·13	1·09	2·40	3·19	1·84	1·39	·35	11·89	22·28	27·05	20
...	...	3	46	358	...	·53	4·24	13·26	1·59	·86	·20	3·05	23·73	24·00	21
...	1	3	144	373	...	...	2·63	11·58	1·58	1·20	·23	10·83	28·05	34·81	22
...	...	6	53	339	...	·08	3·10	12·93	1·35	4·76	·48	4·20	26·90	25·32	23
...	3	9	156	282	...	·10	...	9·90	1·25	·94	·94	16·25	29·38	28·96	24
...	...	...	43	148	4·46	...	8·64	6·26	8·04	3·87	...	12·80	44·07	39·31	25
...	...	1	51	162	...	1·42	·39	7·24	1·29	3·87	·12	6·59	20·92	33·70	26
2	...	7	84	214	4·19	1·39	...	8·94	·28	2·37	·98	11·72	29·87	22·07	27
...	...	4	35	99	...	...	...	5·60	·57	·68	·46	4·00	11·31	16·19	28
2	8	586	10,744	29,664	·13	1·04	2·06	2·11	2·39	11·29	·61	11·15	30·78	33·09	29
...	...	13	459	2,232	·50	·15	35·89	3·42	2·66	9·33	·38	13·55	65·88	37·36	30
...	...	1	78	249	·63	...	·70	7·22	1·05	2·31	·07	5·47	17·45	19·06	31
...	...	...	198	508	...	...	22·33	8·78	3·36	5·55	...	25·55	65·57	8·65	32
4	1	42	1,676	8,481	·29	1·95	30·32	6·10	4·88	10·05	·33	13·28	67·20	42·13	33
...	...	3	77	367	1·77	...	9·62	6·67	5·10	5·01	·29	7·56	36·02	28·46	34
...	3	7	41	247	·12	·25	14·77	5·59	1·24	2·73	·87	5·09	30·66	20·11	35

1	2	3	4	5	6	7	8	9	10		
									Injur		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	B.—TOWNS—*continued.*										
	Poona District—continued.										
36	Lonávla	12,295	1	1	15	110	19	46	...	...	10
37	Junnar	8,820	...	...	73	36	5	16	...	...	1
38	Poona Cantonment	30,958	6	7	223	256	72	194	1	1	4
39	Kirkee do. ...	9,019	...	...	92	40	54	86	...	...	3
	Sholápur District.										
40	Sholápur	61,032	1	3	2,260	864	533	318	4	...	40
41	Bársi	18,097	2	...	413	366	30	46	1	1	8
42	Pandharpur ...	28,550	90	..	350	414	211	72	2	...	5
	Sátára District.										
43	Sátára	18,665	4	1	5	184	45	87	...	1	7
44	Wái	7,280	...	...	112	65	8	32	...	...	2
45	Karád	11,228	...	...	177	26	15	7	...	...	2
46	Ashta	9,351	1	...	133	76	13	9	...	...	4
47	Islámpur	8,574	1	...	8	15	9	48	...	...	7
	Ratnágiri District.										
48	Ratnágiri	15,822	3	...	169	96	48	87	1	...	2
49	Vengurla	17,294	...	3	38	171	32	111	...	1	5
50	Málvan	22,080	2	39	...	251	31	62	...	...	8
51	Chiplun	11,696	...	1	...	96	22	61	...	...	6
	Belgaum District.										
52	Belgaum	31,451	19	2	191	101	46	125	...	...	12
53	Gokák	7,326	49	...	69	23	24	43	...	1	5
54	Athni	13,849	62	...	83	37	34	53	...	...	3
55	Nipáni	10,779	...	...	134	21	35	43	1	...	3
56	Belgaum Cantonment.	9,300	7	...	60	12	13	41	1	...	2
	Dhárwár District.										
57	Dhárwár	29,370	...	...	570	189	73	208	2	...	10
58	Hubli	61,440	...	...	928	226	74	548	...	3	8
59	Gadag-Bettigeri ...	30,429	1	...	22	187	151	187	1	...	12
60	Ránebennur ...	10,931	...	...	33	34	22	81	...	...	8
61	Navalgund ...	7,045	...	...	18	35	3	38	...	...	4
	Bijápur District.										
62	Bijápur	27,569	...	...	337	50	43	188	1	1	15
63	Bágalkot	17,294	50	...	105	72	47	91	...	...	5
64	Guledgudd ...	15,249	95	...	...	116	31	66	1	...	7
65	Ilkal	10,233	25	...	62	36	6	32	...	1	2

No. VI—*continued.*

			11	12	13										14
RIES.					Ratio of Deaths per 1,000 of Population.										
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all Causes. For the year.	From all Causes. Mean of previous five years.	No.
...	...	10	104	306	·08	·08	1·22	8·95	1·55	3·74	·81	8·46	24·89	35·46	36
2	...	3	29	162	...	...	8 28	4 08	·57	1·81	·34	3·29	18·37	21·54	37
...	1	7	181	946	·19	·23	7·20	8·27	2·32	6·27	·23	5·85	30·56	23·13	38
...	...	3	101	376	...	...	10·20	4·43	5·99	9·54	·33	11·20	41·69	31·71	39
8	5	57	1,452	5,488	·02	·05	37·03	14·16	8·73	5·21	·93	23·79	89·92	67·62	40
...	1	11	258	1,156	·11	...	24·48	20·22	1·66	2·54	·61	14·25	63·87	54·65	41
...	...	7	355	1,499	3·15	...	12·26	14·50	7·39	2·52	·24	12·43	52·50	48·41	42
1	1	10	189	525	·21	·05	·27	9·86	2·41	4·66	·54	10·13	28·13	39·32	43
...	2	4	43	264	...	...	15·38	8·93	1·10	4·39	·55	5·91	36·26	40·66	44
2	...	4	98	327	...	...	15·76	2·31	1·34	·62	·36	8·73	29·12	26·90	45
1	...	5	33	270	·11	...	14·22	8·15	1·39	·96	·53	3·53	28·87	26·84	46
1	1	9	46	136	·12	...	·93	1·75	1·05	5·60	1·04	5·37	15·86	40·12	47
...	...	3	101	507	·19	...	10·68	6·08	3·02	5·50	·19	6·38	32·04	18·01	48
3	2	11	109	475	...	·17	2·20	9·89	1·85	6·42	·64	6·30	27·47	26·25	49
5	1	14	114	513	·09	1·76	...	11·37	1·40	2·81	·63	5·16	23·23	19·65	50
...	...	6	24	210	...	·09	...	8·21	1·88	5·21	·51	2·05	17·95	19·57	51
1	...	13	399	896	·60	·06	6·07	3·21	1·46	3·97	·41	12·69	28·49	25·56	52
...	...	6	112	326	6·69	...	9 42	3·14	3·28	5·87	·82	15·29	44·50	64·56	53
2	...	5	97	371	4·48	...	5·99	2·67	2·46	3·83	·36	7·00	26·79	31·41	54
...	...	4	59	296	...	...	12·43	1·95	3·25	3·99	·37	5·47	27·46	28·20	55
...	1	4	86	223	·75	...	6·45	1·29	1·40	4·41	·43	9·25	23·98	11·74	56
2	2	16	527	1,583	...	...	19·41	6·44	2·49	7·08	·53	17·94	53·90	33·09	57
...	3	14	808	2,598	...	...	15·10	3·68	1·20	8·92	·23	13·15	42·29	34·07	58
...	...	13	353	914	·03	...	·72	6·15	4·96	6·15	·43	11·60	30·04	42·53	59
...	...	8	298	476	...	...	3·02	3·11	2·01	7·41	·73	27·26	43·55	55·44	60
...	...	4	48	146	...	...	2·56	4·97	·43	5·39	·57	6·81	20·72	35·20	61
...	...	17	281	866	...	...	12·22	1·81	1·56	5·00	·62	10·19	31·41	34·17	62
...	...	5	339	709	2·89	...	6·07	4·16	2·72	5·26	·29	19·30	40·99	46·37	63
...	...	8	213	529	6·23	...	...	7·61	2·03	4·33	·52	13·97	34·69	26·02	64
...	...	3	191	355	2·44	...	6·06	3·52	·59	3·13	·29	18·67	34·69	44·17	65

1	2	3	4	5	6	7	8	9	10		
									Injur		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	B.—TOWNS—*continued.*										
	Kánara District.										
66	Kárwár	18,045	...	...	...	71	22	22	...	...	3
67	Kumta	10,343	...	2	...	78	22	19	...	...	1
68	Gokarn ...	5,304	...	27	...	37	33	22	...	...	1
69	Honáwar ...	7,323	...	2	7	50	37	8	...	...	4
70	Bhatkal	7,141	...	6	...	58	16	19	...	...	1
	Surat District.										
71	Surat	114,733	15	3	539	459	314	1,544	3	2	30
72	Bulsár	15,972	2	...	1	70	21	117	...	...	5
73	Ránder	10,689	11	...	4	91	25	131	...	...	4
	Broach District.										
74	Broach	43,353	130	...	7	74	41	681	1	1	22
75	Jambusar	8,991	...	...	...	151	25	98	...	...	2
76	Ankleshwar ...	11,344	1	...	...	206	9	44	...	...	3
	Kaira District.										
77	Kaira	7,297	17	...	1	82	16	164	...	...	6
78	Mehmadabad ...	6,330	25	...	...	118	17	38	...	...	2
79	Nadiád	27,145	188	2	...	496	44	304	...	1	21
80	Borsad	11,860	116	...	...	137	77	122	1	3	4
81	A'nand	10,139	50	...	...	214	25	89	...	1	9
82	Umreth	13,651	137	...	...	87	14	183	...	...	12
83	Dákore	7,785	93	...	...	109	15	55	2	...	2
84	Kapadvanj	13,126	...	5	15	131	28	173	...	...	9
	Panch Maháls District.										
85	Godhra	22,102	39	...	3	169	2	22	1	...	2
86	Dohad	9,303	108	...	...	294	14	8	...	...	6
	Ahmedabad District.										
87	Ahmedabad ...	214,000	354	68	46	1,392	663	4,695	1	2	70
88	Dhandhuka ...	8,040	...	3	...	129	38	67	...	...	...
89	Viramgám	20,769	18	2	...	451	29	170	...	...	9
90	Dholka	13,693	125	15	...	142	29	141	...	...	6
91	Ahmedabad Cantonment.	2,305	...	...	...	40	2	3	...	...	...
	Karáchi District.										
92	Karáchi	140,511	285	2	113	1,768	276	1 072	...	...	95
93	Tatta	11,161	...	...	...	266	1	31	1	...	5
94	Kotri	7,256	27	...	...	216	1	35	...	...	2
95	Karáchi Cantonment.	6,004	1	...	...	39	17	...	...	...	1

No. VI—*continued.*

			11	12	13										14
RIES.					RATIO OF DEATHS PER 1,000 OF POPULATION.								From all Causes.		No.
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	For the year.	Mean of previous five years.	
...	...	3	148	266	...	...	...	3·93	1·22	1·22	·17	8·20	14·74	19·73	66
...	...	1	130	252	...	·19	...	7·54	2·13	1·84	·10	12·57	24·36	26·68	67
...	...	1	104	224	...	5·09	...	6·98	6·22	4·15	·19	19·60	42·23	37·33	68
...	1	5	73	182	...	·27	·96	6·83	5·05	1·09	·68	9·97	24·85	22·26	69
...	...	1	72	172	...	·84	...	8·12	2·24	2·66	·14	10·08	24·09	10·72	70
...	...	35	1,317	4,226	·13	·02	4·70	4·00	2·74	13·46	·30	11·48	36·83	25·51	71
...	...	5	89	305	·13	...	·06	4·38	1·31	7·33	·31	5·57	19·09	26·89	72
1	1	6	128	396	1·03	...	·37	8·51	2·34	12·26	·56	11·97	37·04	31·86	73
...	1	25	769	1,727	3·00	...	·16	1.71	·94	15·71	·58	17·74	39·84	31·72	74
...	2	4	54	332	...	...	...	16·79	2·78	10·90	·44	6·01	36·92	34·26	75
...	...	3	77	340	·09	...	...	18·16	·79	3·88	·26	6·79	29·97	28·82	76
...	1	7	63	350	2·33	...	·14	11·24	2·19	22·47	·96	8·63	47·96	36·70	77
2	...	4	132	334	3·95	...	...	18·64	2·69	6·00	·63	20·85	52·76	28·38	78
1	1	24	662	1,720	6·93	·07	...	18·27	1·62	11·20	·88	24·39	63·36	42·01	79
1	...	9	154	615	9·78	...	...	11·55	6·49	10·29	·76	12·98	51·85	37·01	80
...	1	11	62	451	4·93	...	...	21·11	2·47	8·78	1·08	6·11	44·48	28·47	81
...	1	13	237	671	10·04	...	...	6·37	1·02	13·41	·95	17·36	49·15	32·21	82
...	1	5	99	376	11·95	...	...	14·00	1·93	7·06	·64	12·72	48·30	36·22	83
...	1	10	172	534	...	·38	1·14	9·98	2·13	13·18	·76	13·11	40·68	36·09	84
...	...	3	192	430	1·76	...	·14	7·65	·09	·99	·14	8·69	19·46	17·69	85
1	...	7	75	506	11·61	...	...	31·60	1·51	·86	·75	8·06	54·39	45·21	86
1	...	74	4,869	12,161	1·65	·32	·21	6·50	3·10	21·94	·35	22·75	56·82	45·91	87
...	...	...	63	300	...	·37	...	16·04	4·73	8·33	...	7·84	37·31	34·49	88
1	1	11	335	1,016	·86	·09	...	21·71	1·40	8·19	·53	16·13	48·91	35·59	89
2	1	9	244	705	9·13	1·09	...	10·37	2·12	10·30	·66	17·82	51·49	43·18	90
...	...	...	1	46	...	...	...	17·35	·87	1·30	...	·43	19·95	14·14	91
1	1	97	3,302	6,915	2·03	·01	·80	12·58	1·96	7·63	·69	23·50	49·21	38·50	92
...	...	6	123	427	...	...	...	23·83	·08	2·78	·54	11·02	38·26	22·37	93
...	...	2	8	289	3·72	...	...	29·77	·14	4·82	·28	1·10	39·83	29·17	94
...	...	1	50	108	·17	...	...	6·50	2·83	...	·17	8·33	17·99	18·32	95

ANNUAL FORM

1	2	3	4	5	6	7	8	9	10		
									Injur		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	B.—TOWNS—*concluded.*										
	Hyderabad District.										
96	Hyderabad ...	69,140	85	...	2	1,204	153	571	...	...	27
97	Halla	5,853	6	...	...	99	2	...	...	...	...
98	Matiari	6,487	3	...	...	75	5	12	...	...	1
99	Hyderabad Cantonment.	5,883	...	...	...	71	...	...	1	...	...
	Thar and Párkar District.										
100	Umarkot	3,946	...	...	...	179	2	63	...	...	...
101	Mirpurkhás ...	4,856	...	...	...	212	1	67	...	...	2
	Náwábsháh District.										
102	Nawábsháh ...	1,886	...	...	...	38	...	...	...	...	...
103	Tándo Adam ...	10,013	17	...	4	233	3	16	...	...	2
	Lárkána District.										
104	Lárkána	16,046	6	...	...	381	3	5	...	...	3
105	Kambar	6,286	...	...	...	165	...	...	...	...	4
106	Ratodero	5,411	...	...	...	176	1	1	...	...	2
107	Sehwán	4,749	...	...	...	103	...	7	...	...	3
	Sukkur District.										
108	Sukkur	34,916	...	3	...	760	11	49	...	1	16
109	Shikárpur	53,944	8	1	1	1,175	7	51	2	1	15
110	Rohri	9,919	4	...	...	336	10	17	...	...	5
111	Garhi Yásin ...	6,549	...	...	...	147	...	1	...	...	2
	Upper Sind Frontier District.										
112	Jacobabad	11,340	...	...	...	203	5	12	...	...	3
	Total of Towns ...	3,179,621	3,404	1,904	18,298	24,004	7,569	28,092	82	44	1,334
	Total for the Presidency ...	19,587,383	19,841	3,289	79,507	262,401	34,187	79,882	296	243	5,705

N.B.—Districts A in this statement do not include the population or deaths of

No. VI—*concluded.*

			11	12	13										14
RIES.					Ratio of Deaths per 1,000 of Population.										
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all Causes. For the year.	From all Causes. Mean of previous five years.	No.
...	...	27	580	2,622	1·23	...	·03	17·41	2·21	8·26	·39	8·39	37·92	33·36	96
...	...	...	3	110	1·02	...	...	16·91	·34	...	...	·51	18·79	15·94	97
...	...	1	35	131	·46	...	...	11·56	·77	1·85	·15	5·40	20·19	25·88	98
1	...	2	33	106	...	...	....	12·07	...	...	·34	5·61	18·02	16·72	99
...	...	...	18	262	...	...	...	45·36	·51	15·96	...	4·59	66·41	45·35	100
2	...	4	6	290	...	...	...	43·66	·21	13·79	·82	1·24	59·72	57·38	101
1	...	1	1	40	...	...	...	20·15	...	...	·53	·53	21·21	18·91	102
...	...	2	37	312	1·70	...	·40	23·27	·30	1·60	·20	3·70	31·16	24·26	103
...	...	3	171	569	·37	...	...	23·74	·19	·31	·19	10·66	35·46	33·72	104
...	...	4	8	177	...	...	...	26·25	...	...	·64	1·27	28·16	30·33	105
...	...	2	3	183	...	...	...	32·53	·18	·18	·37	·55	33·82	20·86	106
1	...	4	57	171	...	...	...	21·69	...	1·47	·84	12·00	36·91	28·57	107
...	...	17	189	1,029	...	·09	...	21·77	·31	1·40	·49	5·41	29·47	26·89	108
1	...	19	1,031	2,293	·15	·02	·02	21·78	·13	·95	·35	19·11	42·51	38·87	109
1	...	6	27	400	·40	...	...	33·87	1·01	1·71	·61	2·72	40·33	38·68	110
...	...	2	3	153	...	...	...	22·45	...	·15	·30	·46	23·36	35·83	111
...	...	3	81	304	...	...	...	17·90	·44	1·06	·26	7·14	26·80	25·31	112
63	55	1,578	40,126	124,975	1·07	·60	5·75	7·55	2·38	8·83	·50	12·62	39·30	35·07	
1,555	297	8,096	165,382	652,585	1·01	·17	4·06	13·40	1·75	4·08	·41	8·44	33·32	29·09	

Towns B. In all the other statements "Districts" include Towns.

ANNUAL FORM No. VII.—DEATHS *registered from* CHOLERA *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1916.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from cholera were reported.	Number in each District.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	23	22	1,438	299	33	65	51	321	354	108	677	1,177	139	11	...	...	1,459	1,477	2,936	2·79	2·89	2·84	1·55	1
2	West Khándesh ...	10	10	1,096	264	8	3	230	193	505	271	590	614	45	35	...	37	1,270	1,261	2,531	4·33	4·42	4·36	1·30	2
3	Násik	19	17	1,649	245	1	...	...	27	347	208	513	685	189	3	19	8	1,058	942	2,000	2·32	2·09	2·21	1·38	3
4	Thána	17	12	1,643	43	...	...	...	2	43	16	38	63	59	66	28	44	171	187	358	·37	·41	·41	·66	4
5	Kolába	14	12	1,461	54	...	...	...	...	...	1	5	38	128	112	82	119	241	244	485	·81	·84	·82	·87	5
6	City of Bombay ...	1	1	1	1	1	...	3	...	1	2	38	36	20	5	12	5	88	35	123	·14	·10	·13	·47	6
	Central Registration District.																								
7	Ahmednagar	15	14	1,348	246	...	...	...	...	3	152	518	864	398	50	20	4	1,017	992	2,009	2·14	2·12	2·13	2·44	7
8	Poona	18	16	1,201	98	...	...	...	...	...	...	66	405	185	31	13	...	357	343	700	·66	·65	·66	2·18	8
9	Sholápur	10	10	718	90	...	...	...	...	...	...	97	386	204	94	121	201	585	518	1,103	1·49	1·38	1·56	1·89	9
10	Sátára	19	17	1,346	83	...	...	...	...	...	...	12	294	242	132	13	9	364	338	702	·68	·62	·65	·08	10
11	Ratnágiri	15	9	1,311	9	...	...	...	...	...	...	...	...	2	1	26	33	29	33	62	·05	·05	·05	·12	11
	Southern Registration District.																								
12	Belgaum	15	12	1,070	120	1	...	...	...	...	...	2	50	74	94	200	702	638	495	1,123	1·33	1·05	1·19	1·27	12
13	Dhárwár	18	3	1,295	3	...	...	...	1	...	...	...	5	...	...	...	1	6	1	7	·01	·00	·01	1·10	13
14	Bijápur	13	12	1,122	95	...	...	...	...	...	1	...	14	54	72	227	341	367	342	709	·85	·80	·82	1·05	14
15	Kánara	16	..	1,265	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·24	15
	Gujarát Registration District.																								
16	Surat	12	9	760	21	...	...	...	1	...	1	73	44	...	...	...	...	62	57	119	·19	·17	·18	·22	16
17	Broach	9	7	409	18	...	...	...	...	14	2	168	50	3	...	...	...	128	109	237	·81	·73	·76	·24	17
18	Kaira	15	14	586	161	...	...	...	34	154	177	1,396	573	55	2	...	...	1,214	1,177	2,391	3·28	3·63	3·46	·11	18
19	Panch Mahals ...	7	7	660	23	...	...	...	...	...	3	160	165	5	2	...	...	185	150	335	1·12	·96	1·04	·12	19
20	Ahmedabad	13	10	880	30	...	...	...	...	4	9	258	344	56	9	...	...	367	313	680	·85	·79	·82	·13	20
	Sind Registration District.																								
21	Karáchi	16	13	665	87	...	...	...	...	...	...	...	1	128	441	213	26	474	335	809	1·63	1·48	1·57	·59	21
22	Hyderabad	11	10	864	43	...	...	...	...	...	...	...	...	72	258	5	...	204	131	335	·60	·48	·55	·82	22
23	Thar and Párkar ...	13	...	901	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·15	23
24	Nawábsháh	9	3	721	11	...	...	...	...	...	...	...	...	5	24	18	5	29	23	52	·12	·12	·12	·39	24
25	Lárkána	15	2	737	2	...	...	...	...	...	...	...	...	4	2	1	...	3	4	7	·01	·01	·01	·26	25
26	Sukkur	12	3	684	4	...	...	...	...	...	...	...	...	8	20	...	...	15	13	28	·05	·05	·05	·18	26
27	Upper Sind Frontier	6	...	422	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·14	27
	Total for the Presidency.	360	245	26,253	2,05)	44	68	294	579	1,425	951	4,611	5,808	2,074	1,464	998	1,535	10,331	9,510	19,841	1·01	1·01	1·01	·96	

ANNUAL FORM No. VIII.—DEATHS *registered from* SMALL-POX *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1916.*

1	2	3		4		5												6			7		8			9	10
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			NUMBER OF THESE DEATHS AMONG CHILDREN.		TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Under 1 year.	Under 10 years.	Male.	Female.	Total.		
	Western Registration District.																										
1	East Khándesh ...	22	8	1,438	15	...	1	2	6	8	5	5	5	2	...	...	...	21	13	34	9	24	·04	·02	·03	·65	1
2	West Khándesh ...	10	6	1,096	28	4	8	11	6	10	13	7	7	...	1	1	...	40	28	68	18	44	·13	·09	·12	·74	2
3	Násik	19	14	1,649	39	172	153	51	23	26	8	3	1	...	...	1	1	210	229	439	139	271	·46	·51	·49	·38	3
4	Thána	17	12	1,643	47	6	8	17	22	15	15	15	11	7	5	3	5	63	66	129	29	95	·14	·14	·15	·23	4
5	Kolába	14	12	1,461	50	...	2	6	9	16	10	13	13	6	9	6	18	50	58	108	28	67	·17	·19	·18	·37	5
6	City of Bombay ...	1	1	1	1	82	176	334	197	107	65	24	11	5	6	...	1	567	441	1,008	259	272	·90	1·32	1·04	·46	6
	Central Registration District.																										
7	Ahmednagar	15	6	1,348	12	2	1	5	4	1	2	4	2	...	...	1	5	15	12	27	6	16	·03	·03	·03	·16	7
8	Poona	18	12	1,201	55	6	15	37	72	73	62	33	17	13	6	14	6	170	184	354	118	186	·32	·35	·33	·29	8
9	Sholápur	10	4	718	11	4	5	11	2	1	11	10	7	4	1	1	2	32	27	59	9	24	·08	·07	·07	·25	9
10	Sátára	19	11	1,346	28	4	4	5	20	10	8	2	1	1	...	...	...	34	21	55	24	14	·06	·04	·05	·11	10
11	Ratnágiri	15	14	1,311	179	14	30	80	96	98	48	40	34	14	13	18	14	252	247	499	89	172	·46	·38	·41	·22	11
	Southern Registration District.																										
12	Belgaum	15	4	1,070	8	...	...	1	5	3	4	...	...	1	...	...	...	5	9	14	4	4	·01	·02	·01	·18	12
13	Dhárwár	18	3	1,295	5	1	3	1	2	1	...	1	...	...	...	...	...	5	4	9	3	6	·01	·01	·01	·26	13
14	Bijápur	13	1	1,122	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	1	·00	...	·00	·23	14
15	Kánara	16	8	1,265	25	24	43	33	19	19	8	5	2	...	2	1	...	84	72	156	38	36	·33	·34	·36	·41	15
	Gujarát Registration District.																										
16	Surat	12	8	760	28	2	4	5	13	8	10	2	3	...	2	1	2	23	29	52	9	29	·08	·09	·08	·21	16
17	Broach	9	5	409	14	...	...	1	6	...	1	1	...	1	...	3	7	12	8	20	5	9	·09	·06	·07	·05	17
18	Kaira	15	6	586	9	6	2	...	1	...	5	6	...	1	...	...	2	10	13	23	15	6	·03	·04	·03	·08	18
19	Panch Mahals ...	7	1	660	2	...	...	...	...	...	...	...	...	...	...	...	2	...	2	2	...	...	·01	·01	·04	·19
20	Ahmedabad	13	11	880	49	16	14	44	51	23	7	9	4	5	...	5	20	104	94	198	42	119	·24	·24	·24	·21	20
	Sind Registration District.																										
21	Karáchi	16	3	665	3	11	3	...	...	...	...	...	1	...	...	...	...	7	8	15	...	7	·02	·04	·03	·50	21
22	Hyderabad ...	11	1	864	1	...	...	...	...	...	2	...	...	...	...	...	...	...	2	2	1	...	...	·01	·00	·27	22
23	Thar and Párkar ...	13	2	901	4	...	...	...	...	1	...	2	...	1	...	...	4	5	3	8	1	4	·02	·02	·02	·29	23
24	Nawábsháh	9	...	721	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·14	24
25	Lárkána	15	...	737	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·06	25
26	Sukkur	12	3	684	3	...	...	...	...	...	6	3	...	...	...	...	...	2	7	9	2	7	·01	·03	·02	·08	26
27	Upper Sind Frontier	6	...	422	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·13	
	Total for the Presidency.	360	156	26,253	617	354	472	644	554	420	290	183	122	60	46	55	89	1,712	1,577	3,289	850	1,413	·17	·17	·17	·27	

ANNUAL FORM No. IX.—DEATHS *registered from* FEVER *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1916.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from fever were reported.	Number in each District.	Number from which deaths from fever were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	22	22	1,438	1,357	1,048	941	1,384	1,398	1,614	953	1,304	1,860	1,677	1,470	1,296	1,215	8,246	7,914	16,160	15·81	15·44	15·63	12·98	1
2	West Khándesh ...	10	10	1,096	1,076	729	688	970	734	714	495	703	971	711	677	889	854	4,525	4,610	9,135	15·42	16·04	15·73	14·84	2
3	Násik	19	19	1,649	1,513	1,219	814	869	1,021	1,009	835	922	1,269	925	858	1,144	1,204	6,135	5,954	12,089	13·72	11·04	13·33	13·54	3
4	Thána	17	17	1,643	1,560	2,031	1,712	1,718	1,216	1,145	884	797	1,273	1,127	1,073	1,604	1,676	8,290	7,896	16,186	18·15	18·61	18·37	15·97	4
5	Kolába	14	14	1,461	1,362	1,122	1,026	987	778	636	577	684	823	730	612	717	981	4,891	4,782	9,673	16·57	15·99	16 28	15·08	5
6	City of Bombay — *Central Registration District.*	1	1	1	1	149	160	223	201	187	163	147	160	170	150	150	172	1,263	769	2,032	2·00	2·30	2·11	3·01	6
7	Ahmednagar ...	15	15	1,348	1,244	699	578	564	610	769	777	1,082	1,091	991	918	1,024	917	5,159	4,891	10,050	10·90	10·43	10·65	10·49	7
8	Poona	18	18	1,201	1,135	1,096	829	897	927	996	1,002	1,176	1,468	1,323	1,124	1,065	1,240	6,728	6,415	13,143	12·50	12·18	12·34	12·94	8
9	Sholápur	10	10	718	683	747	577	655	574	709	598	988	1,481	1,530	1,407	1,299	1,421	6,005	5,981	11,986	15·34	15·89	15·60	14·46	9
10	Sátára	19	19	1,346	1,261	1,106	881	1,011	999	1,124	1,147	1,159	1,453	1,322	994	1,155	1,263	7,007	6,612	13,619	13·00	12·26	12·60	11·05	10
11	Ratnágiri	15	15	1,311	1,277	1,310	1,214	1,208	1,116	954	958	1,024	1,124	943	1,028	973	810	6,054	6,608	12,662	10·94	10·16	10·92	13·50	11
	Southern Registration District.																								
12	Belgaum	15	15	1,070	880	570	510	513	446	436	459	407	451	416	423	526	635	2,904	2,888	5,792	6·07	6·23	6·15	5·54	12
13	Dhárwár	18	18	1,295	1,162	841	619	743	645	612	506	596	586	616	702	817	963	4,108	4,140	8,248	7·90	8·20	8·05	7·87	13
14	Bijápur	13	13	1,122	1,069	723	567	582	474	598	571	680	865	910	1,129	1,361	1,482	4,901	5,041	9,942	11·30	11·75	11·52	9·42	14
15	Kánara	16	16	1,265	1,019	647	531	448	361	384	406	395	466	460	416	446	516	2,689	2,787	5,476	12·22	13·25	12·72	12·85	15
	Gujarát Registration District.																								
16	Surat	12	12	760	698	652	759	799	592	543	461	475	533	430	488	610	747	3,537	3,552	7,089	10·82	10·86	10·84	15·17	16
17	Broach	9	9	409	388	330	403	438	404	438	364	498	393	377	470	492	415	2,457	2,565	5,022	15·53	17·26	16·38	20·68	17
18	Kaira	15	15	586	550	578	629	847	813	680	517	717	701	652	773	721	538	4,251	3,915	8,166	11·48	12·18	11·81	11·94	18
19	Panch Mahális ...	7	7	660	598	409	378	461	411	353	280	332	563	525	556	579	398	2,634	2,611	5,245	15·83	16·66	16·26	15·90	19
20	Ahmedabad ...	13	13	880	795	1,155	1,077	1,110	981	815	750	985	1,276	1,423	1,520	1,249	1,164	6,854	6,651	13,505	15·86	16·83	16·32	24·18	20
	Sind Registration District.																								
21	Karáchi	16	16	665	665	807	717	607	416	471	365	239	350	580	1,160	1,255	959	4,181	3,745	7,926	14·40	13·10	15·35	9·44	21
22	Hyderabad	11	11	864	864	1,266	981	916	781	660	511	385	475	636	1,238	1,393	1,115	5,708	4,602	10,310	16·91	16·82	16·87	12·24	22
23	Thar and Párkar...	13	13	901	901	1,222	1,101	905	716	585	434	327	315	520	886	1,109	1,058	4,909	4,269	9,178	20·35	22·22	21·18	16·01	23
24	Nawabshah ...	9	9	721	721	1,467	1,270	1,069	789	707	553	378	381	593	911	1,459	1,199	5,885	4,891	10,776	21·74	24·36	24·03	13·41	24
25	Lárkána	15	15	737	737	1,594	1,174	1,158	917	790	648	516	601	876	1,310	2,163	1,677	6,974	6,340	13,314	19·41	21·02	20·15	18·31	25
26	Sukkur	12	12	684	684	1,149	1,041	1,020	906	870	687	534	525	714	1,124	1,538	1,304	6,096	5,316	11,412	19·49	20·38	19·90	16·22	26
27	Upper Sind Frontier	6	6	422	422	464	348	339	267	324	241	156	167	279	491	672	517	2,278	1,987	4,265	15·65	16·92	16·22	13·04	27
	Total for the Presidency ...	360	360	26,253	24,627	25,130	21,525	22,441	19,373	19,023	16,142	17,696	21,623	21,456	23,923	27,709	26,445	134,669	127,732	262,401	13·22	13·59	13·40	12·66	

ANNUAL FORM No. X.—DEATHS *registered from* DYSENTERY *and* DIARRHŒA *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1916.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	23	22	1,438	411	94	84	86	107	143	86	176	328	173	82	109	80	791	757	1,548	1·51	1·47	1·49	1·89	1
2	West Khándesh ...	10	10	1,096	139	14	16	39	42	23	30	68	61	33	19	10	16	216	158	374	·73	·55	·64	·65	2
3	Násik	19	19	1,649	432	74	46	50	60	97	99	188	204	148	94	90	81	624	607	1,231	1·37	1·33	1·36	1·43	3
4	Thána	17	17	1,643	316	76	53	60	50	51	37	53	138	99	75	66	51	474	335	9	1·04	·79	·92	·84	4
5	Kolába... ...	14	14	1,461	472	106	62	68	49	46	32	122	173	135	85	48	62	583	455	938	1·81	1·52	1·66	1·54	5
6	City of Bombay ... *Central Registration District.*	1	1	1	1	217	204	243	221	223	147	180	222	170	154	169	157	1,297	1,010	2,307	2·06	3·03	2·40	3·29	6
7	Ahmednagar	15	15	1,348	700	147	121	124	148	207	203	372	471	268	236	240	205	1,501	1,241	2,742	3·16	2·65	2·90	3·72	7
8	Poona	18	18	1,201	716	131	101	143	171	193	207	388	615	433	322	265	220	1,699	1,500	3,199	3·14	2·84	3·00	4·04	8
9	Sholápur	10	10	718	473	178	126	106	105	158	114	329	521	388	299	317	292	1,570	1,363	2,933	4·01	3·61	3·81	5·42	9
10	Sátára	19	19	1,340	686	121	102	102	127	126	175	364	589	545	339	276	275	1,597	1,544	3,141	2·96	2·85	2·91	3·85	10
11	Ratnágiri	15	15	1,311	877	420	315	344	308	293	279	350	193	121	83	111	128	1,591	1,354	2,945	2·88	2·08	2·45	2·90	11
	Southern Registration District.																								
12	Belgaum	15	15	1,070	656	162	179	153	138	200	237	370	399	330	310	328	362	1,558	1,621	3,179	3 26	3·50	3·37	3·52	12
13	Dhárwár	18	18	1,295	348	92	94	76	59	74	73	138	135	128	128	119	139	649	606	1,255	1·25	1·20	1·22	1·34	13
14	Bijápur	13	13	1,122	577	95	76	94	111	105	133	197	283	344	227	221	252	1,030	1,111	2,141	2·37	2·59	2·48	2·61	14
15	Kánara	16	16	1,265	235	81	69	56	58	38	64	92	127	120	72	86	64	472	455	927	2·14	2·16	2·15	2·32	15
	Gujarát Registration District.																								
16	Surat	12	12	760	162	51	56	60	45	59	68	121	89	35	38	33	31	373	314	687	1·14	·96	1·05	·72	16
17	Broach...	9	9	409	144	12	15	12	32	22	24	52	86	55	19	27	19	203	172	375	1·28	1·16	1·22	·69	17
18	Kaira	15	15	586	231	29	35	40	74	72	82	164	193	119	92	68	31	531	468	999	1·43	1·46	1·44	1·50	18
19	Panch Mahális ...	7	7	660	54	5	5	6	6	9	12	13	23	14	3	6	3	58	47	105	·35	·30	·32	·20	19
20	Ahmedabad ... *Sind Registration District.*	13	13	880	211	70	74	78	61	63	72	134	225	176	159	125	90	714	613	1,327	1·65	1·55	1·61	·76	20
21	Karáchi	16	14	665	31	15	19	17	22	27	13	15	45	65	56	39	30	223	140	363	·77	·49	·70	·41	21
22	Hyderabad	11	10	864	84	25	19	26	14	20	12	14	21	34	51	49	31	173	143	316	·51	·52	·52	·31	22
23	Thar and Párkar ...	13	13	901	70	18	18	12	6	6	5	3	4	3	9	4	11	57	42	99	·24	·22	·23	·09	23
24	Nawabshah	9	8	721	30	4	4	...	2	4	4	2	1	5	17	7	3	33	20	53	·13	·10	·12	·10	24
25	Lárkána	15	10	737	25	3	1	...	...	1	1	1	6	5	9	2	3	20	12	32	·06	·04	·05	·04	25
26	Sukkur...	12	10	684	26	10	5	2	8	6	3	1	...	9	4	15	7	40	30	70	·13	·12	·12	·16	26
27	Upper Sind Frontier	6	5	422	32	7	8	4	2	...	3	3	4	4	4	5	7	27	24	51	·19	·20	·19	·06	27
	Total for the Presidency ...	360	348	26,253	8,189	2,257	1,898	2,001	2,027	2,269	2,210	3,910	5,156	3,959	3,006	2,839	2,650	18,045	16,142	34,187	1·77	1·72	1·75	2·01	

ANNUAL FORM No. XI.—DEATHS *registered from* RESPIRATORY DISEASES *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1916.*

1	2	3		4		5												6			7			8	9
		CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.				
No.	Districts.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
	Western Registration District.																								
1	East Khándesh ...	22	22	1,438	962	566	500	570	441	385	225	346	426	365	403	412	403	2,626	2,416	5,042	5·03	4·71	4·87	4·11	1
2	West Khándesh...	10	10	1,093	640	297	234	295	194	136	101	139	148	132	123	164	201	1,184	980	2,164	4·03	3·39	3·73	2·57	2
3	Násik ...	19	19	1,649	1,027	437	383	402	349	288	283	321	392	285	287	334	391	2,115	2,057	4,172	4·65	4·59	4·62	3·95	3
4	Thána ...	17	17	1,613	405	117	114	124	62	90	74	78	88	79	75	75	101	622	455	1,077	1·36	1·07	1·22	1·00	4
5	Kolába ...	14	14	1,461	506	67	67	54	52	39	90	134	115	112	130	114	135	648	461	1,109	2·19	1·54	1·87	1·00	5
6	City of Bombay...	1	1	1	1	916	1,013	1,261	1,174	952	740	822	793	745	705	765	906	6,052	4,830	10,882	9·63	14·49	11·29	10·52	6
	Central Registration District.																								
7	Ahmednagar ...	15	15	1,348	976	417	325	332	290	325	354	416	453	476	420	412	466	2,241	2,445	4,686	4·72	5·22	4·96	3·96	7
8	Poona ...	18	18	1,201	728	358	273	277	309	419	315	438	518	477	457	441	513	2,403	2,422	4,825	4·47	4·60	4·53	3·35	8
9	Sholápur ...	10	10	718	357	186	122	117	91	97	116	114	173	150	155	182	315	885	933	1,818	2·26	2·48	2·30	1·91	9
10	Sátára ...	19	19	1,346	617	194	162	142	130	149	174	216	253	234	262	218	238	1,163	1,259	2,422	2·18	2·32	2·24	1·29	10
11	Ratnágiri ...	15	15	1,311	874	393	362	388	376	352	363	380	382	392	308	458	407	2,507	2,094	4,601	4·53	3·22	3·82	1·49	11
	Southern Registration District.																								
12	Belgaum ...	15	15	1,070	673	310	274	226	216	227	162	224	240	202	246	301	356	1,582	1,412	2,994	3·31	3·05	3·18	2·98	12
13	Dhárwár ...	18	18	1,295	848	400	374	341	289	255	285	336	345	331	386	439	522	2,114	2,222	4,336	4·07	4·40	4·23	3·62	13
14	Bijápur ...	13	13	1,122	735	275	210	241	209	213	221	191	198	270	245	269	355	1,531	1,366	2,897	3·53	3·18	3·36	2·61	14
15	Kánara ...	16	16	1,265	289	68	55	42	42	50	59	59	54	47	56	59	72	392	262	654	1·78	1·25	1·52	1·12	15
	Gujarát Registration District.																								
16	Surat ...	12	12	760	642	460	651	741	540	555	479	460	461	368	416	539	681	3,407	3,044	6,451	10·42	9·35	9·87	6·83	16
17	Broach ...	9	9	409	291	199	226	301	224	191	176	214	227	163	164	183	234	1,394	1,098	2,492	8·81	7·40	8·13	5·78	17
18	Kaira ...	15	15	586	510	474	522	645	565	443	469	630	630	557	567	529	491	3,639	2,952	6,591	9·83	9·18	9·53	9·19	18
19	Panch Mahals ...	7	7	660	174	42	37	44	26	38	27	29	39	42	25	44	44	275	162	437	1·66	1·03	1·35	·86	19
20	Ahmedabad ...	13	13	880	469	621	843	795	629	465	351	450	787	595	545	581	629	3,980	3,311	7,291	9·21	8·38	8·81	5·02	20
	Sind Registration District.																								
21	Karáchi ...	16	14	665	34	108	138	122	99	101	68	78	95	113	141	76	94	698	535	1,233	2·40	1·87	2·39	1·88	21
22	Hyderabad ...	11	9	864	75	81	105	86	53	46	31	36	34	47	68	82	87	413	343	756	1·22	1·25	1·24	·87	22
23	Thar and Párkar.	13	12	901	168	145	100	86	60	16	13	11	10	18	13	20	25	330	187	517	1·37	·97	1·19	·31	23
24	Nawábshah ...	9	8	721	40	18	33	32	22	17	3	...	...	1	1	1	14	82	60	142	·33	·30	·32	.14	24
25	Lárkána ...	15	10	737	23	7	16	3	...	...	1	...	...	3	1	6	9	28	10	38	·08	·03	·05	·05	25
26	Sukkur ...	12	12	684	31	32	25	19	12	11	2	7	8	5	12	17	19	121	48	169	·39	·18	·29	·21	26
27	Upper Sind Frontier ...	6	5	422	34	16	7	9	7	2	14	2	5	7	4	8	5	53	33	86	·36	·28	·33	·07	27
	Total for the Presidency ...	360	348	26,253	12,124	7,304	7,171	7,705	6,481	5,872	5,196	6,131	6,934	6,218	6,365	6,729	7,756	42,485	37,397	79,882	4·17	3·98	4·08	3·17	

ANNUAL FORM No. XII.—DEATHS *registered from* PLAGUE *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1916.*

1	2	3		4		5												6			7			8	9
		CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.				
No.	Districts.	Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
	Western Registration District.																								
1	East Khándesh...	22	18	1,438	41	...	12	4	...	...	...	...	5	5	117	173	563	484	393	877	·92	·76	·85	1·32	1
2	West Khándesh...	10	10	1,096	136	20	14	1	...	...	...	...	99	619	686	1,009	1,723	2,001	2,170	4,171	6·82	7·55	7·18	·20	2
3	Násik ...	19	18	1,649	162	1,052	688	822	42	2	...	46	317	363	319	559	1,058	2,447	2,411	4,858	5·38	5·37	5·37	3·42	2
4	Thána ...	17	13	1,613	54	31	96	108	53	22	24	56	33	10	7	14	10	288	176	464	·63	·41	·53	·75	4
5	Kolába ...	14	9	1,461	24	15	15	26	21	13	10	1	8	10	14	7	22	78	84	162	·26	·28	·27	·85	5
6	City of Bombay...	1	1	1	1	44	138	474	656	345	87	69	33	34	39	30	33	1,434	548	1,982	2·28	1·64	2·06	2·46	6
	Central Registration District.																								
7	Ahmednagar ...	15	15	1,348	296	97	261	501	162	30	8	227	320	1,358	2,388	2,185	2,915	4,848	5,504	10,352	10·20	11·74	10·97	·63	7
8	Poona ...	18	18	1,201	322	375	398	189	33	7	1	36	165	1,063	2,551	2,874	3,313	5,280	5,665	10,945	9 81	10·75	10·28	1·63	8
9	Sholápur ...	10	10	718	352	2,073	2,229	945	172	13	4	178	562	477	874	2,120	3,474	6,818	7,203	14,021	17·42	19·12	18·25	4·03	9
10	Sátára ...	19	19	1,346	247	1,062	773	451	108	25	73	263	491	623	1,131	1,573	2,042	4,066	4,492	8,558	7·54	10·16	7·92	3·00	10
11	Ratnágiri ...	15	6	1,311	11	2	10	2	9	16	48	92	52	29	12	25	18	158	180	338	·20	·28	·28	·11	11
	Southern Registration District.																								
12	Belgaum ...	15	15	1,070	261	709	776	498	195	67	91	303	559	621	618	738	1,008	3,022	3,148	6,170	6·32	6·79	6·55	6·69	12
13	Dhárwár ...	18	17	1,295	412	879	681	277	129	752	176	415	640	848	903	1,069	1,628	3,779	3,998	7,777	7·27	7·92	7·59	10·97	13
14	Bijápur ...	13	12	1,122	261	771	667	265	66	3	32	516	1,202	803	1,042	1,090	1,174	3,745	3,886	7,631	8·63	9·06	8·84	6·57	14
15	Kánara ...	16	4	1,265	4	2	6	4	2	...	...	3	2	14	7	6	18	34	30	64	·15	·14	·15	·22	15
	Gujarát Registration District.																								
16	Surat ...	12	10	760	34	102	119	131	41	4	1	...	8	41	55	82	189	397	376	773	1·21	1·15	1·18	1·50	16
17	Broach ...	9	2	409	4	...	1	7	9	...	...	...	...	...	...	1	2	11	9	20	·07	·07	·07	·20	17
18	Kaira ...	15	6	586	11	2	4	5	7	1	1	...	...	...	16	38	57	72	59	131	·19	·18	·19	·51	18
19	Panch Mahals ...	7	2	660	3	...	...	...	1	...	...	...	...	1	1	...	6	5	4	9	·03	·02	·03	·30	19
20	Ahmedabad ...	13	1	880	1	1	1	3	...	2	2	...	...	3	1	16	17	35	11	46	·08	·03	·06	·12	20
	Sind Registration District.																								
21	Karáchi ...	16	2	665	2	...	4	3	8	64	14	5	2	10	4	...	3	71	46	117	·24	·20	·23	2·78	21
22	Hyderabad ...	11	2	864	7	3	13	10	7	1	...	...	...	...	...	...	...	22	12	34	·07	·04	·06	·46	22
23	Thar and Párkar.	13	...	901	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·06	23
24	Nawábshah ...	9	2	721	2	2	1	...	...	3	...	...	...	...	...	...	...	4	2	6	·02	·01	·01	·07	24
25	Lárkána ...	15	...	737	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·02	25
26	Sukkur ...	12	1	684	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	·00	...	·00	·14	26
27	Upper Sind Frontier ...	6	...	422	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·03	27
	Total for the Presidency ...	360	213	26,253	2,649	8,122	6,847	4,247	1,721	751	572	2,150	5,069	6,930	10,788	13,637	18,673	39,100	40,407	79,507	3·84	4·30	4·06	2·23	

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ANNUAL SANITARY REPORT FOR 1917.

SECTIONS I to IV.—No remarks.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

The birth and death ratios are calculated on the population revealed by the census of March 1911.

2. During the year, among 30,192 Europeans, 353 births and 256 deaths were recorded against 324 and 284 in 1916 : the calculated birth-rate was 11·69 per mille against 10·73 in 1916, and the death-rate 8·48 against 9·41. Of the 353 births, 184 were male and 169 female against 164 and 160 in 1916 ; this represents a high proportion of male births—1,088 to 1,000. Of the 256 deaths, 176 were male and 80 female : the male death-rate being 8·15 and the female 9·31.

Europeans.

3. In a population of 8,902,·186 births and 135 deaths were registered against 210 and 161 respectively in 1916 ; the birth-rate was 20·89 per mille against 23·59 in 1916 and the death-rate 15·16 against 18·09. Of the births, 84 were males and 102 females against 111 and 99 in 1916; of the deaths 76 were males and 59 females against 83 and 78 in 1916.

Anglo-Indians.

4. The population including Sind was, in 1911, 19,587,383. During the year no change was made in the number of registration units.

Indian Population.

5. Six lakhs ninety-nine thousand eight hundred and twenty-three births were registered, showing a decrease of 4,849 from the figure for 1916 and an increase of 14,080 over that for the decennial mean. The number of births recorded annually since 1907 is given below :—

Births.

1907	... 610,533	1913	... 684,803
1908	... 660,201	1914	... 733,076
1909	... 657,685	1915	... 726,780
1910	... 689,701	1916	... 704,672
1911	... 705,090	1917	... 699,823
1912	... 684,890		

The decrease noted above is practically limited to the Province of Sind, where the number of births registered was 7,625 less than in 1916. In the Presidency proper the number of births registered (626,287) exceeded the number in 1916 by 2,776.

6. The birth-rate for the year for the Presidency and Sind combined was 35·73 ; for the Presidency alone 40·02 ; and for the Province of Sind 20·97. The rates recorded in other parts of India are given below :—

Bengal ...	35·91	Bihar and Orissa ...	40·4
Madras ...	32·37	United Provinces ...	46·08
Assam ...	31·35	Punjab ...	45·3
Burma ...	36·25	Central Provinces ...	48·13

The birth-rate for rural areas was 41·25 against one of 30·87 for urban areas.

7. Over rural areas the variation in birth-rates was from 60·72 for Sakri Taluka in West Khandesh District to 27·85 for Mundgod in Kanara District. Of the 187 talukas, pethas and mahals, 35 or 18·7 per cent. returned birth-rates under 35 per 1000. Of these 11 (Vengurla, Sangmeshwar, Rajapur, Mandangad, Guhagar, Ratnagiri, Chiplun, Devgad, Dapoli, Khed and Malvan) were in Ratnagiri District; 7 (Dahanu, Umbergaon, Shahapur, Murbad, Kalyan, Bassein and Salsette) in Thana District ; 7 (Haliyal, Karwar, Ankola, Sirsi, Supa, Yellapur and Mundgod) in Kanara District ; 4 (Bhimthadi, Haveli, Indapur and Maval) in Poona District ; 3 (Shrigonda, Nevasa and Ahmed-

nagar) in Ahmednagar District; 2 (Walwa and Malcolmpeth in Satara District, and 1 (Malsiras) in Sholapur District.

The rural circles in Ratnagiri, Kanara and Thana Districts are consistent in returning low birth-rates year after year. This is due in part to the difficulty of registration in the case of a scattered population, and also in part to the debilitating effect of endemic malaria.

8. Out of 85 towns, 22 against 24 in 1916 returned birth-rates of over 40, viz., Dohad (54·18), Gokak (53·64), Dholka (52·65), Kapadvanj (52·26), Ranebennur (52·24), Umreth (52·23), Borsad (50·84), Dhandhuka (50·12), Nasirabad (48·11), Gokarn (47·70), Jambusar (47·60), Erandol (45·64), Nadiad (45·02), Ankleshwar (44·52), Kaira (42·89), Anand (42·70), Broach (42·44), Barsi (42·05), Dharwar (41·88), Gadag-Bettigeri (41·70), Sholapur (40·47) and Ahmedabad (40·24).

For 41 towns, or 48·23 per cent. against 18·7 per cent. for rural areas, the recorded birth-rates were less than 35 per 1,000; for 14 towns against 12 in 1916 the recorded birth-rates were less than 20, viz., Ahmednagar (19·21), Ratnagiri (17·76), Manmad (17·70), Panwel (17·57), Pandharpur (17·44), Lonawla (17·16), Sangamner (16·96), Kurla (16·45), Kalyan (16·03), Karad (15·22), Junnar (12·47), Uran (11·66), Mahad (11·58) and Poona City (11·46).

In 1915 only 7 towns returned a birth-rate of under 20. It looks as if registration in municipal areas is deteriorating.

9. Twenty-one thousand three hundred and thirty-two births were registered in Bombay City against 20,848 in the previous year, the birth-rate being 22·14 against 21·65 in 1916.

10. In Sind 73,536 births were recorded: a reduction of 7,625 on the number for 1916. The fall is attributed to malaria. There is no doubt of the heavy mortality among children, and it is probable that many infants died whose births were not registered. The birth-rate for the year was 20·97 against one of 23·14 in 1916.

In the Presidency proper the rural exceeds the urban birth-rate. In Sind the reverse is the case. The urban birth-rate was 32·64 against one of 19·37 for rural areas. The urban birth-rate in Sind is in excess of that recorded in urban areas in the Presidency.

Of 19 urban circles, two—Karachi (43·68) and Rohri (41·64)—returned birth-rates of over 40; two—Rato-dero (37·51) and Larkana (36·71)—between 35 and 40; and four—Sukkur (34·57), Garhi-Yasin (32·22), Kambar (31·82) and Shikarpur (31·03)—between 30 and 35.

Registration in rural areas in Sind is in a very bad way, and accuracy cannot be expected until material change in the present system can be introduced.

11. The birth-rate for Ahmednagar Cantonment was 30·08; while for the remaining Cantonments it was below 20; varying between 18·66 for Ahmedabad Cantonment and 6·07 for Poona.

12. Out of 699,823 births, 363,460 were males and 336,363 were females. The ratio of male to female births was as 108·05 to 100. The corresponding figure for males last year was 107·49. The proportion of male to female births registered varied from 100·00 in Ahmednagar District to 137·47 in Hyderabad District. The latter figure is extraordinarily high, and occurring as it does year after year, denotes laxity in registration of female births.

Still-births.

13. Eleven thousand five hundred and sixty-nine still births, or 1·68 per cent. of the total live births, were registered. The corresponding figures for 1916 were 10,940 and 1·55 per cent. The percentage of still to live births varied from ·07 for Ahmednagar District to 8·78 for the City of Bombay. In Belgaum (2·70), Dharwar (4·01), Bijapur (3·12) and Kanara (5·55) the percentages of still to live births are as usual high.

Deaths.

14. Seven lakhs ninety-eight thousand four hundred and six deaths were registered against 652,585 in 1916. Deaths among males numbered 405,949 and among females 392,457

against 335,545 and 317,040 in 1916. The following table shows that the number of deaths recorded is much in excess of that registered in any of the previous ten years :—

1907	... 606,606	1913	... 521,539
1908	... 501,838	1914	... 577,504
1909	... 505,936	1915	... 511,613
1910	... 560,003	1916	... 652,585
1911	... 555,312	1917	... 798,406
1912	... 683,210		

15. The recorded death-rate was 40·76 against 33·32 in 1916 and a decennial mean of 29·64.

The death-rates recorded in other parts of India indicate that a rise in mortality during the year was fairly general :—

Madras	... 26·23	Bihar and Orissa	... 35·02
Bengal	... 26·19	Punjab ...	... 37·9
Assam	... 27·09	United Provinces	... 37·91
Burma	... 25·30	Central Provinces	... 36·06

16. Excluding Bombay City and Sind, the death-rate for the Presidency was 43·11 against 35·82 in 1916. The death-rates for rural and urban areas were 42·64 and 48·26 against 34·75 and 43·71 in 1916, respectively.

For districts the highest death-rate (59·17) was recorded in Satara and the lowest (24·19) in Panch Mahals.

17. Of the 187 talukas, pethas and mahals, 43 against 13 in 1916 returned death-rates above 50, viz., Koregaon (94·78), Khatav (80·84), Amalner (73·15), Barsi (71·72), Sampgaon (70·44), Khanapur (69·15), Dharwar (67·65), Dhulia (65·30), Man (65·13), Satara (64·95), Murgod (63·15). Sindkheda (62·99), Karad (62·85), Mehmadabad (62·30), Chopda (60·03), Sindgi (59·94), Indi (59·43), Bagalkot (58·66), Bhusawal (58·34), Badami (58·14), Tasgaon (57·64), Belgaum (57·16), Malsiras (56·98), Hukeri (56·43), Niphad (55·87), Ranebennur (55·73), Gokak (55·06), Daskroi (54·96), Halyal (54·71), Sangola (54·14), Mundargi (54·12), Sanand (53·04), Yawal (52·87), Hangal (52·74), Shirpur (52·09), Malegaon (51·98), Dindori (51·70), Khanapur (51·55), Erandol (51·25), Parola (51·24), Yeola (50·88), Jalgaon (50·54) and Nandurbar (50·53), 53 against 24 in 1916 returned rates above 40, viz., Pachora, Bhadgaon, Raver, Edlabad and Jamner in East Khandesh; Shahada in West Khandesh; Nasik, Sinnar, Nandgaon, Baglan, Kalwan in Nasik; Bhiwandi in Thana; Karjat, Newasa, Kopergaon, Sangamner in Ahmednagar; Junnar, Ambegaon, Indapur, Purandhar, Bhimthadi, Dhond, Mulshi in Poona; Sholapur, Karmala, Pandharpur in Sholapur; Jawali, Wai, Khandala, Walwa, Patan in Satara; Chandgad, Athni, Parasgad in Belgaum; Nargund, Gadag-Bettigeri, Karajgi, Bankapur, Kalghatgi, Kod in Dharwar; Hungund, Muddebihal, Bagewadi, Bijapur, Bilgi in Bijapur; Mundgod, Supa in Kanara; Bardoli in Surat; Broach, Amod in Broach; Gogo, Dhandhuka, Viramgam in Ahmedabad.

18. For urban areas there was a very wide variation in the death-rates, ranging from 100·50 for Dhandhuka to 17·15 for Godhra. Out of 85 urban registration areas, 45 against 28 in 1916 returned death-rates over 40, viz., Dhanduka (100·50), Malegaon (100·04), Ranebennur (88·37), Sholapur (80·41), Dohad (74·71), Ahmedabad (73·43), Bagalkot (72·45), Chopda (64·91), Jalgaon (63·04), Viramgam (62·06), Mehmadabad (61·14), Bhusawal (59·52), Ahmednagar (59·39), Dholka (58·20), Ilkal (58·05), Nasirabad (55·70), Nasik (55·24), Surat (53·84), Barsi (53·37), Kaira (53·17), Gadag-Battigeri (52·38), Amalner (52·22), Karad (52·19), Dharangaon (51·45), Guledgad (51·35), Poona City (50·74), Rander (50·70), Gokak (50·23), Islampur (49·80), Nandurbar (49·58), Trimbak (49·53), Pandharpur (49·18), Sangamner (48·98), Yeola (47·98), Umreth (44·31), Nadiad (43·54), Wai (42·72), Baramati (42·39), Kapadvanj (42·28), Satara (41·79), Bassein (41·26), Khed (41·21), Gokarn (41·10), Dharwar (40·99) and Athni (40·29).

These unnecessarily high death-rates in towns and cities must give rise to grave concern and in time to a desire to place the sanitary administration on a sound footing. Once this desire is general the existing outstanding difficulty owing to lack of funds will be solved by an increase in local taxation to meet much-needed expenditure in the interest of public health.

19. The following table gives death-rates corrected in accordance with age and sex distribution for the few towns for which such correction is possible :—

	Standard death-rate.	Factor for correction.	Recorded death-rate, 1917.	Corrected death-rate.
Presidency	37·7	1	43·11	43·11
Bombay City	31·2	1·21	33·83	40·93
Ahmedabad	36·3	1·03	73·43	75·63
Karachi	35·6	1·06	48·30	51·19
Surat	36·6	1·03	53·84	55·45
Poona	36·5	1·03	50·74	52·26
Sholapur	36·3	1·03	80·48	82·89

Bombay City.

20. The uncorrected death-rate for Bombay City was 33·83 against 30·79 in 1916 and a decennial mean of 34·76. The registered number of deaths was 32,591 against 29,664 in 1916. The infant mortality rate of 409·6 per 1,000 registered births is very high.

Ahmedabad City.

21. The uncorrected death-rate was 73·43 against 56·82 in 1916 and a quinquennial mean of 48·74. The main causes of death were plague and respiratory diseases.

Two thousand nine hundred and twenty-five infants under 1 year died, corresponding to a ratio of 339·6 per 1,000 registered births.

The improvement in birth registration continues.

Surat City.

22. The uncorrected death-rate was 53·84 against 36·83 in 1916. The birth-rate was 29·89 against 31·12 in 1916. There is still room for improvement. The infantile death-rate was 200·52 per 1,000 registered births.

Poona City.

23. The uncorrected death-rate was 50·74 against 67·20 in 1916. The birth-rate was 11·46 against 6·94 in 1916. This slight rise is due to the subsequent inclusion in the birth register of some of the infants whose deaths were reported. During the year 1,432 infants under 1 year died, and only 1,446 births were registered. Under such circumstances the calculation of an infant mortality rate is useless. The municipality appear to have made no real attempt to improve registration.

Karachi City.

24. The birth-rate was 43·68 against 49·68 in 1916. The death-rate was 48·30 against 49·21 in the previous year. The infantile deaths numbered 1,751, corresponding to a ratio of 285·32 per 1,000 births.

Death-rate in Sind.

25. The death-rate for Sind was 32·55 against 23·23, in 1916. The variation between the rate for urban areas (54·36) and that for rural areas (29·56) is very marked. The urban death-rates range between 28·02 for Hala and 80·25 for Rohri.

Death-rate in cantonments.

26. The lowest death-rate (17·79) was recorded in Poona Cantonment and the highest (65·21) in Deolali Cantonment.

Natural increase or decrease in population.

27. Over the Presidency, as a whole, the deaths exceeded the births by 98,583. Figures for districts are given in columns 6 and 9, Annual Form II, and the following table gives the natural increase or decrease in population for the principal registration areas :—

	Excess of births over deaths.	Percentage increase on Population, 1911.	Excess of deaths over births.	Percentage decrease.
Presidency, including Sind, and Bombay City	.....	.....	46,718	·31
Sind	.....	.....	40,606	1·16
Bombay City	.....	.....	11,259	1·17

Owing to very defective birth-registration the natural decrease in the Province of Sind is not real. If death-registration be fairly accurate it may well be assumed that with a death-rate of only 32·55 the births actually exceeded the deaths.

28. Four lakhs five thousand nine hundred and forty-nine male and 392,457 female deaths were recorded giving death-rates of 39·84 and 41·76, respectively, against 32·93 and 33·73 for 1916. For every 100 females 103·44 males died. The corresponding figure for 1916 was 105·84. In Sind, ratio of male to female deaths was as 110·47 to 100.

Infant mortality.

29. The mortality of infants based on the number of registered births was 216·67 per 1,000 against 199·57 during the previous year. The male and female rates were 220·06 and 213·01 respectively as compared with 206·34 and 192·29 in the previous year.

Infantile deaths formed 18·99 per cent. of the total deaths against 21·58 in 1916. The percentage of infantile to total deaths naturally falls in a year of severe mortality from plague, which is essentially an adult disease.

The following is a short extract from the report of the Executive Health Officer, Bombay Municipality :—

"*Infant Mortality.*—The total mortality among infants or children up to one year of age recorded during the year under review was 8,870 showing an increase of 655 deaths compared with 1916 and of 964 above the average of the preceding quinquennium (1912—1916). The corrected number of briths works out to 29,158 and therefore gives an infant mortality equal to the ratio of 304·25 per 1,000 of births against 278·48 in 1916 and 235·4 in 1915.

Debility and the diseases of the respiratory and nervous systems caused in the aggregate nearly 79 per cent. (6,846) of the total infant mortality (8,870) against 73 per cent. (6,025) in 1916 and about 75 per cent. in 1915.

As compared with 1916 the following decreases in infant mortality were in evidence under the following causes: small-pox (—189), measles (—51), fevers (—12) and diarrhœal diseases (—64); on the other hand, debility registered an increase of 331 and respiratory diseases of 396. The total increase under all causes was of 655 deaths.

The mortality among children born prematurely (346) during the year was higher than the average of the preceding five years (121) and lower by 11 than in 1916.

Infant mortality by age-periods.—The following table classifies infantile deaths from principal causes under the three age-groups of 1—30 days, 1—6 months and 7—12 months during 1917 :—

Age-period.	Small-pox.	Measles.	Malaria.	Ague.	Diarrhœa and Dysentery.	Premature birth.	Debility.	Nervous system.	Respiratory system.	All Causes.
1 to 30 days	·03	...	·10	·64	·57	11·42	73·21	7·83	2·66	33·54
1 to 6 months	·85	·74	·15	2·74	4·61	·22	9·92	31·39	42·39	30·35
7 to 12 months	1·43	1·96	·18	3·46	8·61	...	1·59	10·39	53·73	36·11
Total ...	·78	·93	·14	2·29	4·70	3·90	28·13	15·90	33·13	

Out of 21,651 children registered as born in 1917, 2,975 died within 30 days of birth, being 144 more than in the preceding year; for a very large majority of these 2,178 or 73·21 (against 1,984 or 70·8 in 1916) the cause of death given was debility, that is, want of vitality, immaturity at birth, wilful or ignorant neglect and the methods adopted by the unskilled or untrained women attending labour.

It will be observed that out of the total mortality under 1 year of age, over 36 per cent. occurred in the age-group of 7—12 months and, further, that of the deaths at this period of life, more than half are due to the diseases of the respiratory system. In the first and second age-groups the maximum mortality is due to debility and the diseases of the respiratory system, respectively. The next most fatal cause is diseases of the nervous system in the second and third groups and diarrhœa and dysentery in the third group, all of which signify exposure and defective feeding.

Among Hindus of all castes taken together and Mussalmans who together form the bulk of the City's population, the ratios stand as under :—

	1916.	1917.	Increase or decrease.
Hindus	420·3	451·9	+31·6
Mussalmans	403·2	402·1	−1·1

Infant mortality by the number of rooms occupied.—It will be observed from the following statement that of the 21,651 live births registered during the year, 14,536 or 67·13 per cent. occurred in families living in a single room or sharing it with others, and the number of deaths among such was 6,999 or 48 per cent. of the births; this proportion varies inversely as the number of rooms occupied; 43 per cent. in the case of two-room tenements, 27·1 per cent. in the case of three-room tenements and 26·5 in families occupying four or more rooms. The lowest percentage of the infant mortality (11·76) occurred among children born in hospitals. The corresponding figures for 1916 are also given in the table :—

	1 room and under.	2 rooms.	3 rooms.	4 or more rooms.	Roadside.	Hospitals.	Total.
Births	14,536	2,509	696	681	41	3,188	21,651
Infant mortality	6,999	1,080	189	181	46	375	8,870
Infant mortality per 100 births registered — 1917 ...	48·14	43·04	27·15	26·57	112·19	11·76	40·96
Infant mortality per 100 births registered — 1916 ...	45·44	37·39	23·01	23·82	171·18	9·18	38·78

"There are at present three Maternity Homes for the poor—one Municipal at Bellasis Road, and two under the Lady Willingdon Scheme, of which one is at Parel and the other at Victoria Bunder, Colaba. The second has since 1st May been taken over by the Municipality.

"During the year under report, the Health Visitors made in all 26,578 visits to houses and chawls and reported 1,139 houses to the Health Department for their insanitary condition, 25 houses for limewashing and 10 premises for overcrowding, brought 140 patients to the dispensaries and reported 1,783 children for vaccination.

"The Ladies Committee formed during 1916 and composed of some of the most prominent women in the City have visited the Maternity Homes regularly and supervised the work of the Health Visitors by visiting the different sections of the City in order to acquaint themselves personally with the conditions of life and surroundings of the poor with a view to their amelioration. Improvement of slum life and in the care and feeding of expectant and nursing mothers and of infants are the chief directions in which their energies are manifested.

"A notable step taken during the year by the Lady Willingdon Scheme in the promotion of the welfare of women and children was the establishment of Infant Milk Depôts—one at each of the three Maternity Homes referred to. Pure pasteurised milk supplied in sealed cans by the Indian Dairy Supply Company, Limited, at annas four per seer is distributed at each of these deptôs—morning and evening—at anna one per seer or entirely free to those too poor to pay this small sum—for the benefit of children born in any of the three Homes or under the supervision of the Municipal Nurses or the Health Visitors working under the Bombay Sanitary Association or the Lady Willingdon Scheme. Feeding bottles have also been provided free and empty bottles are exchanged each time for those with milk. The amount of milk had to be repeatedly increased to meet the growing demand and at present 85 seers of milk is daily distributed at a monthly cost of about Rs. 650.

"The Municipal Nurses and Midwives who are ten in number working under the District Registrars paid during the year 29,548 visits to houses, chawls and huts (against 32,111 in 1916), enquired in 2,796 cases of ordinary sickness, reported 491 cases of infectious diseases and 1,743 deaths among the female population of the City. They also attended 1,604 confinements (against 1,354 in 1916) and ascertained 11,225 births.

Of the total number of 23,539 births (inclusive of still-births) registered in the City during the year under review, 15,183 or 64·5 were visited by the Municipal Nurses and Midwives, thus marking an increase of 2·2 in the verification work compared with the preceding year.

"The proportion of still-births shows a slight increase of ·7 over the figure for 1916.

"The proportion of births wholly unattended remained steady during the year (4·9).

"The proportion of confinements attended by unskilled women received an appreciable check during 1917 as it declined to 57·9.

"The proportion of confinements attended by qualified Midwives, including municipal, shows a rise of 1 per cent. during the year—from 14·5 to 15·5, while that of confinements attended by municipal Midwives rose from 9·4 to 10·5.

"The percentage of children born in hospitals was the highest during the year (21·4) showing an increase of 2·1 over 1916 and of 9·1 since 1909. This rise may be accounted for by the increasing number of Lying-in-Hospitals in the City.

"The percentage of children born in a healthy condition was 79·4; this is an improvement of 1 per cent. over the previous year's figure and of 10·4 since 1909. The proportion of children fed on breast was 75·2 being 5·3 higher than in 1916 and an improvement of 10·3 since 1909.

"The proportion of mothers who left home for work leaving their children to the care of others registered an increase of 3·7. The percentage of children dying within 30 days of birth (11·3) rose by 1·0 per cent. compared with 1916.

"Relief to poor women during confinement in the shape of necessaries and comforts such as milk, loaves, bed, blanket, charpoy and linen, &c., was continued during the year and dispensed in 551 cases agaist 382 in 1916.

"Five hundred and twelve women were admitted duing the year in the municipal Maternity Home and of these 467 were confined. These figures are an advance on those for the preceding year as 136 more women were admitted and 115 more women confined in the Home during 1917".

This infant welfare work in Bombay City is well organized, but is only a beginning. Before statistical evidence of its benefit is forthcoming it will require considerable extension. Nearly 60 per cent. of confinements are still attended by untrained women, and of the estimated number of births—29,158—only 52 per cent. of the houses in which infants were born could be visited by the ten municipal Nurses. Dr. Turner has pointed out that the problem is too vast for the Health Department to grapple with alone, and that private enterprise is necessary.

In the mofussil little has yet been accomplished, but a start has been made. In a few cities Maternity Wards at which dais can be trained have been opened: and the establishment of more wards is only waiting the provision of funds. In Surat City two lady Health Visitors have been appointed, who in 1915-1916 visited 2,026 newly born infants and in 1916-1917, 1,872. There are special classes for the training of dais, and the percentage of labours attended by entirely unskilled women is slowly falling. Dr. Pinto, the Health Officer, has appealed for 4 trained Midwives, and it is to be hoped that his appeal will fall on sympathetic ears. The mortality of infants in the first month of life is appalling and much of it can be prevented easily. The subjoined table shows the percentage of infantile deaths occurring at that period:—

District.	Under 1 month.	Between 1 and 6 months.	Between 6 and 12 months.
Belgaum	42·	31·	27·
Dharwar	44·	31·	25·
Bijapur	43·	32·	25·
Kanara	64·	22·	14·
Bombay City	33·54	30·35	36·11

The comparatively low percentage of deaths in infants under one month reported in Bombay City may be explained by the fact that many mothers leave Bombay for confinement and only return when the child is perhaps over one month old.

Deaths by castes or classes.

30. The deaths by classes in each collectorate are recorded in Annual Form V, Appendix IV.

31. The sub-joined table shows the number of deaths in 1917 arranged according to causes and contrasted with the results for 1916 and with the mean of preceding five years:—

	Mean for 5 years, 1912—1916.		1917.		1916.	
	Number.	Ratio per 1,000 of Population.	Number.	Ratio per 1,000 of Population.	Number.	Ratio per 1,000 of Population.
Cholera	21,527	1·10	17,003	·87	19,841	1·01
Small-pox	5,017	·26	3,095	·16	3,289	·17
Plague	39,533	2·02	162,874	8·31	79,507	4·06
Fever	255,801	13·06	298,919	15·26	262,401	13·40
Dysentery and diarrhœa ...	39,983	2·04	36,321	1·85	34,187	1·75
Respiratory diseases ...	67,863	3·47	90,667	4·63	79,882	4·08
Injuries	7,753	·39	7,650	·39	8,096	·41
Other causes	151,813	7·75	181,877	9·29	165,382	8·44
All causes	589,290	30·09	798,406	40·76	652,585	33·32

For comments on the causes of deaths, *vide* Section VI.

Cantonments in *quasi*-Native States.

32. The total number of births registered in those Cantonments which are situated in *quasi*-Native States during the year 1917 was 2,090 against 2,036 in 1916; the birth-rate being 20·88 per mille as against 20·34 in 1916. There were 4,468 deaths giving a ratio of 44·64 per mille against 34·15 and a ratio of 34·12 in 1916. The statistics are tabulated below :—

Statement showing the names of Cantonments with Population and Deaths from diseases for the year 1917.

Cantonments.	Population according to Census of 1911.	Area in square miles.	Average population per square mile.	Number of births.	Ratio of births per 1,000 of population.	Number of deaths from									Ratio of deaths per 1,000 of population.								
						Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.	Injuries.	Other causes.	All causes.	Cholera	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.	Injuries.	Other causes.	All causes.
Aden. Municipal limits ...	40,684	6⅞	602	799	19·64	...	...	88	97	349	...	24	603	1,161	...	...	2·16	2·38	8·58	...	·59	14·82	28·54
Aden. Purely civil population of Cantonment ...	307	⅞	42	8	26·06	...	...	2	10	1	...	...	4	17	...	...	6·51	32·57	3·26	...	...	13·03	55·37
Baroda ...	3,478	1	3,478	49	14·09	...	2	16	23	11	...	...	28	80	...	·58	4·60	6·61	3·16	...	...	8·05	23·00
Deesa ...	7,129	5	1,425·8	213	29·88	...	...	73	75	16	...	...	43	207	...	...	10·24	10·52	2·24	...	...	6·03	29·03
Mhow ...	22,360	6·5	3,440	325	14·53	1	11	315	289	1	...	...	642	1,259	·04	·49	14·09	12·92	·04	...	...	28·71	56·30
Nasirabad ...	16,144	8·58	1,881	506	31·34	1	2	...	674	...	...	8	673	1,358	·06	·12	...	41·75	...	...	·49	41·69	84·11
Neemuch ...	9,786	4·52	2,165	178	18·19	...	8	147	32	...	3	...	193	383	...	·82	15·02	3·27	...	·31	...	19·72	39·14
Rajkot ...	201	·56	359	12	59·70	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...	14·92	14·92
Total ...	100,089	100·87	992	2,090	20·88	2	23	641	1,200	378	3	32	2,189	4,468	·02	·23	6·40	11·99	3·78	·03	·32	21·87	44·64

Rainfall.

33. In the Presidency rainfall was above the average and well distributed. In October it was excessive in the Konkan, Gujarat and parts of the Deccan, and some damage was caused to the crops.

In Sind the rainfall was exceptionally heavy and was undoubtedly associated with the severe incidence of malaria.

The following table is of interest :—

	Fall in 1917.	Fall in 1916.	Average of previous 5 years.
Nawabshah	20·	3·	5·
Thar and Parkar	30·	14·	12·
Larkana	16·	9·	5·
Sukkur	11·	1·	3·
Upper Sind Frontier	11·	4·	4·

Price of grain.

34. The prices of food-grains were higher than normal throughout the Presidency. The quantity purchasable per rupee varied between 2 per cent. below normal in Kaira District to 44 per cent. in Kolaba District.

Grain compensation was paid to those entitled to this concession from May 1st.

SECTION VI.

HISTORY OF CHIEF DISEASES.

Cholera.

35. Seventeen thousand and three deaths from cholera were registered against 19,841 in 1916. In the following table the number of deaths recorded each year for the past 20 years is given. The average annual mortality works out to 21,671:—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1898 ...	4,368	1902 ...	3,229	1906 ...	46,119	1910 ...	3,694	1914 ...	17,779
1899 ...	8.579	1903 ...	1,825	1907 ...	7,656	1911 ...	5,817	1915 ...	377
1900 ...	163,889	1904 ...	13,156	1908 ...	1.759	1912 ...	64,505	1916 ...	19,841
1901 ...	13,600	1905 ...	5,396	1909 ...	28,714	1913 ...	5,134	1917 ...	17,003

36. The severity of the epidemic in 3 years, 1900, 1906 and 1912 is noteworthy. In these years the monsoon was abnormal: a recurrence of an abnormal monsoon may easily be associated with another serious epidemic: for, although much has been done in various centres to improve the water-supply, the conditions over the Presidency as a whole are distinctly favourable to the spread of infection. The history of the epidemic in 1917 is illustrative. Fourteen thousand four hundred and sixty-one deaths or 85 per cent. of the total were reported from the districts of Belgaum, Bijápur and Dhárwár. The infection was introduced late in 1916 to two of the districts—Belgaum and Bijápur—and probably from Pandharpur. At first the spread was very slow, and it was not till the arrival of the season for pilgrimages and marriage festivals associated with general and wide movements of the population that the epidemic assumed serious proportions. Year by year the same story is told: late introduction of infection which at first smoulders but finally is fanned into flame by customs which necessitate journeys from place to place. It is obviously impossible to interfere with these customs, but if it were possible to stamp out cholera before the season arrives the history of cholera would be modified considerably. The time to tackle cholera is at the time of introduction of infection, and during the smouldering period, that is during the last few months of the year. This will be possible when District Public Health staffs are appointed, and it augurs well for the future of cholera that steps towards their institutions have been taken.

37. In the districts of Belgaum, Bijápur and Dhárwár the percentages of villages infected came to 33·74, 34·32 and 26·11, respectively. In Kánara 498 deaths were recorded, and the epidemic was chiefly felt in the area adjacent to Dhárwár District. The rest of the Presidency proper got off lightly with 1,539 deaths; the majority of which occurred in the districts of Sholápur and Sátára. In Sholápur District the first villages to be infected were those on the Sholápur bank of the Bhima river and infection almost certainly came from a village on the Bijápur bank. Subsequently the villages in the neighbourhood of Sholápur City reported cases. At this time plague was prevalent in the city and many of the inhabitants were in temporary camps. Cholera appeared in the camps situated on the banks of the Ekrukh Canal, and from thence spread to a few surrounding villages.

38. In Sátára District there were two epidemics apparently unconnected. In the early portion of the year infection appeared in Tásgaon and Chinchni, and was probably brought from the Southern Marátha Country. This limited epidemic was of importance for, through it cholera was carried to Ratnágiri District. At the time of the Maghi festival at Pandharpur many pilgrims go by road from Ratnágiri District. The route passes through Tásgaon and Chinchni. Unfortunately at the time of the return of the pilgrims cholera was present in these two places, and the infection was distributed by them over the Devgad, Guhágar and Málvan Tálukas. This illustrates the importance of sanitary arrangements on main pilgrim routes. The second outbreak in Sátára District occurred in August and was limited to a few villages on the Krishna river. The origin of infection could not be traced. A second epidemic occurred also in Ratnágiri District, and the infection came from Bombay City.

39. In the Khándesh and Násik District, the incidence of cholera was very light. Gujarát escaped with only 32 deaths. In Sind 449 deaths were reported against 1,231 in 1916. The epidemic of 1916 had practically subsided at the end of the year. In August there was a fresh outburst, which was felt most severely in the towns of Sukkur, Shikárpur, Gari Yasin and Jacobabad.

40. Serious as the epidemic in the Southern Marátha Country was it might have been still worse but for the prohibition of Jotiba's fair in Kolhápur State. The prevalence of plague was the reason for prohibition.

41. In the absence of a Public Health staff few preventive measures could be taken: a certain number of wells were disinfected and treatments distributed. The post-card system of notification has not been carried out properly. In view of the possible appointment of district public health staffs in the future it is important that all village officers should learn the necessity of punctuality in the submission of these post-cards. Early notification is the essential preliminary of preventive measures.

Dysentery and Diarrhœa.

42. Thirty-six thousand three hundred and twenty-one deaths, of which 18,915 were males and 17,406 females, were recorded against 34,187 in 1916 and 40,764 the decennial mean. The death-rate was 1·85 against 1·75 in 1916 and a quinquennial mean of 2·04.

The increase was mainly in the districts of the Southern Marátha Country in which cholera was epidemic.

The annual number of deaths registered under this head since 1906 is tabulated below:—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1906 ...	61,736	1909 ...	35,039	1912 ...	57,039	1915 ...	31,707
1907 ...	53,703	1910 ...	46,643	1913 ...	34,021	1916 ...	34,187
1908 ...	40,781	1911 ...	31,549	1914 ...	42,961	1917 ...	36,321

43. The urban death-rate was 2·29 and the rural 1·77 against 2·38 and 1·62 in 1916, respectively.

The following table gives the towns in which the death-rate was over 2 per 1,000 and compares the death-rate for the year with the quinquennial mean:—

Town.	Death-rate.	Mean.	Town.	Death-rate.	Mean.
Násik	3·68	2·84	Athni	3·68	4·55
Manmád	2·88	2·45	Nipáni	3·53	2·71
Yeola	2·27	2·53	Belgaum Cantonment ...	3·01	2·02
Thána	3·34	2·32	Dhárwár	3·34	2·33
Bándra	2·14	2·62	Hubli	2·08	1·29
Bhiwndi	2·41	1·73	Gadag-Bettigeri	7·20	3·50
Ahmednagar	2·54	2·35	Ránebennur	2·29	1·76
Ahmednagar Cantonment ...	3·23	0·96	Bágalkot	3·18	2·95
Poona	4·87	8·95	Kumta	4·83	2·55
Bárámati	5·59	2·75	Gokarn	13·76	4·90
Kirkee Cantonment ...	3·77	5·77	Honáwar	5·74	3·38
Sholápur	4·96	12·02	Borsad	4·22	4·28
Bársi	3·76	3·95	Dákor	2·70	2·34
Pandharpur	6·34	9·16	Ahmedabad	2·35	1·76
Sátára	2·99	6·00	Dholka	2·26	1·77
Ashta	3·10	3·23	Karáchi Cantonment ...	2·33	1·42
Islámpur	2·22	2·07	Hyderabad	4·15	1·94
Gokák	3·00	4·26	Rohri	3·73	1·99

44. Deaths from dysentery and diarrhœa occur chiefly during and after the monsoon, and are associated with impurities in the water-supply. In Poona City the partial sterilization of a portion of the supply has certainly been connected with the recent continued reduction in the mortality. The reduction would be still more evident if there was only one source of supply, and the distribution was not so imperfect. If the number of deaths among the infants in the orphange at Pandharpur could be excluded the influence of the introduction of a piped water-supply on the incidence of these diseases would be evident. The low incidence of the disease in Hubli, which is a large manu-

facturing town, is noteworthy. Hubli is one of the few towns possessing a satisfactory installation for purifying water.

FEVERS.

45. Two lakhs ninety-eight thousand nine hundred and ninteen deaths (152,054 males and 146,865 females) were recorded as due to fevers against 262,401 in 1916 and a decennial mean of 249,315. The death-rate was 15.26 against 13·40 in 1916, and a quinquennial mean of 13·06.

The annual mortality attributed to fevers since 1906 is given below:—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Numb of deaths.
1906 ...	274,653	1909 ...	223,888	1912 ...	286,321	1915 ...	224,797
1907 ...	260,329	1910 ...	263,528	1913 ...	246,319	1916 ...	262,401
1908 ...	243,372	1911 ...	223,027	1914 ...	259,164	1917 ...	298,919

46. The mortality from fever was the highest since 1901.

In Sind, 98,384 deaths from fever were recorded against 67,181 in 1916 and 54,444, the mean of previous 5 years. The death-rate was 28·06 against 19·16 in 1916 and a quinquennial mean of 15·53.

The district death-rates varied between 40·68 in Sukkur to 13·56 in Karáchi. In addition to Sukkur the districts most severely affected were Upper Sind Frontier (39·91), Lárkána (30·99) and Nawabshah (30·48).

Although malaria was the main cause of the high mortality, many of the deaths were due to pneumonia. The exceptionally heavy rainfall in Sind in 1917 was undoubtedly connected with the heavy mortality.

This mortality was nearly 100 per cent. over the quinquennial mean and about 50 per cent. above that for 1916, in itself an exceptionally heavy bad fever year. The only practical method of dealing with the epidemic was the sale and distribution of quinine. Unfortunately the price of quinine and its scarcity interferred with the supply of the drug in necessary quantities. In 1915 a comparatively healthy year, 825 lbs. were disposed of, apart from hospitals and dispensaries. In 1916 the quantity fell to 685 lbs. and in 1917 to 675·5 lbs. In the latter year in addition 456 lbs. of quinoidine were distributed. It is understood that more quinine would have been sold and distributed had more been available.

In the Presidency proper there was no apparent rise in the incidence of malaria. The fever mortality only slightly exceeded that of 1916, and the excess was practically limited to the Southern Marátha districts in which the epidemic of cholera was most severely felt. In last year's report the connection between "fever" mortality and "cholera" was noted.

47. *Preventive measures.*—No Sub-Assistant Surgeons could be employed in the Presidency proper with travelling dispensaries. In Sind four Officers were deputed for this work—2 in Lárkána, 1 in Hyderabad and 1 in Sukkur. They treated between them over 15,000 cases of malaria.

Three thousand five hundred and twenty-nine lbs. of quinine against 3,616 lbs. in 1916 were sold or distributed free in the Presidency and Sind by District Local Boards, Municipalities and Post Offices. In addition 810 lbs. of quinoidine were disposed of.

48. During the year Rs. 1,70,066 were spent on measures against malaria. Of this sum, Rs. 54,567 came from Provincial, Rs. 1,00,957 from Municipal and Rs. 14,542 from District Local Board funds.

The main items in Provincial expenditure were—

(*a*) a grant of Rs. 15,000 to the Bombay City Municipality, and

(*b*) Rs. 38,369 for the provision of quinine treatments.

The expenditure in Bombay City amounted to Rs. 66,787, including a grant of Rs. 15,000 from Government. Of this, Rs. 40,645 were establishment charges, Rs. 4,131 contingencies, Rs. 1,442 were spent on disinfectants, and Rs. 20,569 on filling in or covering over with concrete wells, tanks, etc.

In mofussil municipalities, Rs. 43,096 were spent on filling up mosquito-breeding grounds; the most important of which was the improvement to the bed of the Lyari river in Karáchi, towards which the municipality devoted

Rs. 30,000. The Hyderabad Municipality spent Rs. 5,648 in filling up a tank; and the Sukkur Municipality devoted a grant of Rs. 2,457 from the Sanitary Board to improving a marsh. On the free issue of quinine the municipalities expended Rs. 3,682. All but an infinitesimal portion of this sum was expended by the municipalities in the districts of Ahmedabad, Broach, Thána, Kànara, Karáchi and Upper Sind Frontier. The Karàchi Municipality spent Rs. 1,800 on the purchase of oil for the treatment of mosquito-breeding grounds: the total expenditure under this head by municipalities being Rs. 2,240. The expenditure by District Local Boards was confined to the purchase of quinine and quinoidine. The sum of Rs. 9,682 was spent in the free distribution of these drugs to sufferers: while in the quininization of school children the expenditure was Rs. 4,860. Apart from Kánara and Dhárwár Districts in which limited trials were made, the quininization of school children was most actively carried out in the districts of Hyderabad and Lárkána in Sind. It is stated in these districts that the regular use of quinine has been followed by an increased attendance of children during the malaria season. No exact figures showing the effect on the incidence of malaria among school children in Sind can be given. The experience in schools has shown that quinoidine is unsuitable for prolonged use among children.

Plague.

49. One hundred and sixty-two thousand eight hundred and seventy-four deaths (80,246 males and 82,628 females) were recorded against 79,507 in the previous year and 46,838 the decennial mean.

The anual number of deaths since 1906 is given below :—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1906	61,525	1910	25,043	1914	20,060
1907	93,609	1911	100,399	1915	43,824
1908	27,345	1912	28,984	1916	79,507
1909	24,319	1913	25,288	1917	162,874

Since plague first appeared 1,837,390 deaths have been reported: the average annual number is 83,518. The greatest number recorded in any one year was 281,269 in 1903.

50. *Distribution.*—For details, *vide* Form XII.

Two hundred and eighty-five out of 360 registration circles were infected against 213 in 1916. Five thousand four hundred and ninty-six towns and villages, or 20·9 per cent. of the total, reported deaths against 2,649 or 10 per cent. in 1916.

In the Presidency proper 159,858 deaths were registered; but of these over 94 per cent. were returned from 13 out of the 20 districts. It will be remembered that in 1916 the chief force of the epidemic was felt in the Southern Maratha Country, the Deccan and Khándesh. These districts suffered again in 1917, but the epidemic was also severe in Gujarát, where 20,934 deaths were registered against 979 in 1916. The infection of Gujarát, as a whole, after so many years of comparative freedom, is of great epidemiological interest: similarly interest is attached to the intensity of the epidemic—exceptional for recent years—in the districts of Sátára (31,801 deaths), East Khándesh (17,817 deaths), West Khándesh (11,712 deaths) and Násik (12,766 deaths). The main factor influencing the intensity of plague is undoubtedly rat infestation. As the number of rats varies directly with the abundance of available food supply, rat infestation, associated as it is with human plague, must be taken as an index of prosperity. Conversely, famine followed by a reduction in the number of rats means invariably little or no plague. The reason for any abnormality in the incidence of plague will always be found in the grain trade. In the grain-producing districts restrictions on export by rail must, in a prosperous year, lead to increased local distribution and storage. Given a number of infected foci or carrying over villages, and these were unusually numerous in the Deccan and Khándesh in early part of the year, the conditions are exceptionally favourable for a severe epidemic. In Gujarát the introduction of infection has been probably connected with alteration in the crops. It has

been stated that the cultivation of cotton and tobacco has increased greatly in recent years, and has naturally led to an enhanced importation of grains. The areas from which the merchants import are influenced by the price of the grains, and the price again is dominated by production. Increased production is, as is mentioned above, connected with plague; so districts like Gujarát, into which large quantities of grain are imported, share with the grain-producing districts the danger of agricultural prosperity. The grain trade of the Presidency as a whole is being closely studied in view of its close association with plague.

51. In East Khándesh 17,817 deaths were recorded against 877 in 1916. The death-rate was 17·23 against ·85 in 1916, and a quinquennial mean of ·71.

Infection was introduced into the district in October 1916 and persisted. No less than 12 towns and villages situated in 7 tálukas carried over infection during the off-season of 1917. A widespread epidemic was inevitable. Forty per cent. of the towns and villages in the district reported deaths. Out of 77 places in which markets are held 71, or over 90 per cent. were infected. Two thousand six hundred and fifty-eight inoculations were performed in 8 towns and 11 villages: a very small number out of the 586 towns and villages infected. One thousand three hundred and eighty-five of the inoculations were done by two special temporary inoculators; 499 by Sub-Assistant Surgeons; and the remainder in jails or by private medical practitioners. Inoculation has still to make headway in this district.

52. In West Khándesh 11,712 deaths were registered against 4,171 in 1916: the death-rate was 20·17 against 7·18 in 1916 and a quinquennial mean of 1·54. This district was infected in August 1916, and the infection died out in the off-season of 1917 except in Navápur. During the first half of the year 6,994 deaths occurred as the result of the 1916 epidemic. In the latter half of the year the district was probably re-infected by importation. Thirty-seven per cent. of the towns and villages in the district reported deaths during the year. Out of 39 places in which markets are held 32, or 82 per cent. were infected.

Seven thousand one hundred and thirty-nine persons were inoculated in the district: of these 1,177 were resident in Dhulia town and 1,408 were inmates of the jail. The special temporary inoculator visited 26 towns and villages and did 2,947 inoculations. One thousand four hundred and fifty-nine inoculations were done by Sub-Assistant Surgeons and the remainder by private medical practitioners.

53. In Násik District there were 12,766 deaths against 4,858 in 1916. The death-rate was 14·12 against 5·37 in 1916 and a quinquennial mean of 4·32. During the off-season infection was carried over in 4 places, all in different tálukas. Twenty-five per cent. of the towns and villages reported deaths during the year. Out of 83 places in which markets are held 58 or close on 70 per cent. were infected. There was a very severe epidemic in Málegaon Town, 1,501 deaths being recorded. Násik Town, with 765 deaths, also suffered severely. Nine thousand one hundred and ninty-six persons were inoculated: of these 6,798 were done by Sub-Assistant Surgeons in charge of 16 dispensaries. One thousand eight hundred and forty inoculations were done by the Civil Surgeon of Násik, and the remainder by private medical practitioners.

54. In Poona District 10,766 deaths were registered against 10,945 in 1916. The death-rate was 10·11 against 10·28 in 1916 and a quinquennial mean of 3·39. In the off-season infection persisted in 3 places and spread in the latter half of the year in those tálukas. Six thousand three hundred and sixty-eight deaths were reported in the first six months of the year and were the result of the 1916 epidemic. Thirty-seven per cent. of the towns and villages were infected. Out of 51 places in which markets are held 43 or 84 per cent. reported deaths. Thirty-six thousand five hundred and twenty-four inoculations were performed; of these 32,767 were in Poona City (24,437), Poona Cantonment (5,971) and Kirkee Cantonment (2,359). The majority of the inoculations in Poona City was done by private medical practitioners. Temporary inoculators visited 26 towns and villages and inoculated 1,885 persons.

In Poona City 945 deaths were recorded: infection was introduced from Kirkee Cantonment and also probably from Khed, and early implicated the big

granaries in Nana's Peth. A rat-trapping campaign was started in the city at the end of August, and resulted by the end of the year in the deaths of over 100,000 rats. The work was carried on under considerable difficulty; mainly through the demand for labour keeping the staff below the necessary strength, but also on account of the passive opposition of certain sections of the community. It is to be hoped that the "Arogya Mandal"—a Society formed with the object of improving the City—will give this campaign its active support.

55. In Sholápur District there were 13,975 deaths against 14,021 in 1916. The death-rate was 18·19 against 18·25 in 1916 and a quinquennial mean of 5·86. Over 10,000 deaths were recorded in the first half of the year and were the direct result of the 1916 epidemic. Only one village carried over infection in the off-season and the epidemic in the second half of the year was not severe.

During the year 47 per cent. of the towns and villages reported deaths. Out of 50 places in which markets are held 43 or 86 per cent. were infected.

One thousand five hundred and ninty-six persons were inoculated during the year, and of these 1,447 resided in Sholápur City.

A modified rat-trapping campaign was carried out in Sholápur City and 16,000 rats were destroyed.

56. In Sátára District 31,881 deaths were registered against 8,558 in 1916. The death-rate was 29·50 against 7·92 in 1916 and a quinquennial mean of 3·81.

During the off-season infection persisted in 10 tálukas and spread widely with the advent of favourable conditions. The mortality in the second half of the year was very severe. Fifty-seven per cent. of the towns and villages reported deaths. Out of 76 places in which markets are held 72 or nearly 95 per cent. were infected.

Twenty thousand one hundred and six persons were inoculated; of these 11,176 were in Wái, Sátára and Mahábleshwar. Three temporary inoculators visited 27 towns and villages and did 9,068 inoculations. Four thousand eight hundred and forty-seven persons in 7 towns and villages were inoculated by Sub-Assistant Surgeons.

Rat-destruction operations were continued at Sátára and Mahábleshwar. In Sátára City 122 deaths from plague were reported and in Mahábleshwar 15.

Sátára City was therefore comparatively free from plague, although the epidemic raged in the villages of the táluka. The comparative immunity of this town has had no influence on the general intensity of the epidemic in the district. Similar measures in the important grain centres would, undoubtedly, result in a greatly reduced general mortality.

57. In Ahmednagar District the epidemic was distinctly less severe than in 1916. Six thousand seven hundred and eleven deaths were registered against 10,352 in 1916: the death-rate was 7·11 against 10·97 in 1916 and a quinquennial mean of 2·43.

Over half the deaths occurred in the first half of the year as a termination of the 1916 epidemic. During the off-season the infection persisted in 3 villages, the most important being one in Kopargaon Táluka. As a result 30 per cent. of the deaths occurring in the second half of the year were reported from this táluka.

Twenty-six per cent. of the towns and villages were infected during the year. Nine hundred and ninty-one deaths were recorded in Ahmednagar City.

Out of 53 places in which markets are held 34 or 64 per cent. reported deaths.

Thirteen thousand four hundred and seventy inoculations were performed; of which 11,019 were in Ahmednagar City.

A temporary inoculator visited 9 towns and villages and inoculated 2,071 persons. The Civil Surgeon of Ahmednagar did 4,023.

58. In the 6 districts of the Central Division, 98,917 deaths were reported during the year. In 3 districts—Sholápur, West Khándesh and Poona—the maximum mortality occurred in the first half of the year. In the remaining 3 districts the infection persisted during the off-season in a number of carrying

over villages, with the result that the epidemic was most intense in the latter half of the year. Year after year experience proves that Major Kunhardt is right in the emphasis he lays on the importance of these carrying over villages, and the necessity for making every possible effort to stamp out infection during the off-season. It is doubtful if measures against these villages limited to the off-season will stamp out plague; but, it is very probable that supplemented by continuous rat campaigns in important grain-distributing centres they will materially reduce plague mortality.

59. In the 6 districts of the Southern Division, 20,244 deaths were registered. Three of the districts—Kánara, Kolába and Ratnágiri—returned only 1,341 deaths, but this number is above the mean. In Kánara plague is entirely confined to the above-ghát tálukas in direct grain connection with Dhárwár District. The coast line of Kánara has never suffered from an epidemic, and the explanation almost certainly lies in the limited importation of grains such as jowári and bájri.

60. In Belgaum District 11,843 deaths were reported against 6,170 in 1916. The death-rate was 12·57 against 6.55 in 1916, and a quinquennial mean of 5·29. The larger number of deaths occurred in the latter half of the year, but 4,545 were recorded in the first six months through the persistence of the 1916 epidemic. The infection continued during the off-season in 22 villages in 7 tálukas.

Fourty-one per cent. of the towns and villages were infected. Out of 72 places in which markets are held 70, or 97 per cent. returned deaths.

Ten thousand and five persons were inoculated; 4 temporary inoculators visited 38 towns and villages and did 5,735 inoculations; the Sub-Assistant Surgeons in charge of dispensaries did 2,273.

61. In Dhárwár District 9,164 deaths were recorded against 7,777 in 1916. The death-rate was 8·94 against 7·59 in 1916 and a quinquennial mean of 4·97. Three thousand three hundred and fifty-seven deaths occurred during the first 6 months in continuation of the 1916 epidemic. The infection persisted during the off-season in 16 villages of 8 tálukas. Thirty-eight per cent. of the towns and villages were infected during the year. Out of 85 places in which markets are held 54 or 63 per cent. returned deaths.

Twenty-seven thousand five hundred and eighty inoculations were done. One temporary inoculator visited 31 towns and villages and inoculated 9,111 persons: 14,614 persons were inoculated by Sub-Assistant Surgeons in charge of dispensaries.

62. In Bijápur District 7,896 deaths were returned against 7,631 in 1916. The death-rate was 9·15 against 8·84 in 1916 and a quinquennial mean of 5·99. During the first 6 months 2,582 deaths were reported: the infection persisted during the off-season in 2 tálukas. During the year 31 per cent. of the towns and villages were infected. Out of 64 places in which markets are held 45 or 70 per cent. reported deaths.

Eighteen thousand five hundred and twenty-nine persons were inoculated. Three temporary inoculators visited 37 towns and villages and did 7,863 inoculations: the Sub-Assistant Surgeons in charge of dispensaries did 3,382. The remainder were done in the jail and by private medical practitioners.

63. The 6 districts comprising the Northern Division returned 22,288 deaths. Although the mortality in all districts was very much above the mean the force of the epidemic was chiefly felt in the districts of Ahmedabad, Surat and Kaira.

64. In Ahmedabad District 12,415 deaths were registered against 46 in 1916. The death-rate was 15·0 against ·06 in 1916 and a quinquennial mean of ·05.

Rather over half the deaths occurred in Ahmedabad City, which was infected late in 1916. The infection persisted through the off-season, and

resulted in severe mortality during the last four months of the year. Those of the inhabitants who could afford it migrated wholesale to other towns and villages, and without doubt contributed to the spread of infection through Gujarát. How far dissemination of infection was due to migration and how far to the grain trade cannot be estimated. Thirty per cent. of the towns and villages in the district were infected: included in the infected towns are the two places in which markets are held.

Twenty thousand and nine hundred persons were inoculated, almost all being residents of Ahmedabad City.

65. In Surat District 3,818 deaths were recorded against 773 in 1916. The death-rate was 5·84 against 1·18 in 1916 and a quinquennial mean of 1·23. Two thousand one hundred and forty-one of the deaths were registered in Surat City: the remainder in 138 towns and villages or 18 per cent. of the total.

In Surat City a half-hearted rat trap campaign was carried out and 30,264 rats were killed. A campaign of this nature does little good. The municipality employed a special medical officer to move through the town to inoculate the healthy and to treat the sick. The Health Officer and others inoculated in the open streets. In this way 4,156 inoculations were performed in the city: not a very encouraging response to the effort made. In the district 6,660 persons were inoculated.

66. In Kaira 3,294 deaths were registered against 131 in 1916. The death-rate was 4·76 against ·19 in 1916 and a quinquennial mean of ·09.

Only 210 deaths were recorded in the first half of the year, and the district was free from infection during June. The epidemic during the last half of the year was due to importation of infection. Twenty-six per cent. of the towns and villages returned deaths. Two thousand five hundred and twenty-nine persons were inoculated: of these 1,235 were resident in Nadiád City.

67. In Sind 3,016 deaths were registered against 158 in 1916. Of this, 2,427 were recorded in the cities of Karáchi and Hyderabad. Five thousand and forty-three persons were inoculated in Karáchi City; 1,692 in Hyderabad and 815 in Sukkur District. The epidemic in Sukkur District affected 10 per cent. of the towns and villages and resulted in 467 deaths.

68. Information regarding the inoculation of 241,139 persons during the year has been received. The number done in 1916 was 211,960.

Nineteen temporary inoculators were employed during the year and performed 44,531 inoculations in 223 towns and villages. The total cost of the temporary staff amounted to Rs. 21,836-12-5. Sixty thousand two hundred and seven inoculations were done by Civil Surgeons and medical officers in charge of dispensaries. Twenty-three thousand and sixty by private medical practitioners; 11,578 by Medical Officers in charge of prisons. Thirty-six thousand and forty in Native States and the remainder in Cantonments by military medical officers.

Out of the 205,099 inoculations in British territory, 74,081 were in 7 large cities and Cantonments, *viz.*, Poona (24,437), Ahmedabad (15,668), Ahmednagar (11,019), Bombay (6,917), Kirkee Cantonment (5,971), Sátára (5,026) and Karáchi (5,043).

Five hundred and eighty-seven attacks and 215 deaths were reported among persons who had been inoculated in British territory. One hundred and ninety were attacked during the incubation period of the disease and 97 died: the case mortality rate being 51·05 per cent. Three hundred and ninty-seven were attacked subsequent to the incubation period and 118 died: the case mortality rate being 29·7. As has been pointed out the majority of inoculations were done in cities in which the epidemic was severe at the time. The fact that only 190 were attacked within 10 days of inoculation with a case mortality of 50 per cent. tends to show that inoculation mitigates the severity of attack in a very short time. Accurate figures to show the actual protective value of inoculation against attack are difficult to obtain. It is interesting however to note that the attack incidence on the 205,099 inoculated persons was 2·8 per 1,000. All these

persons were exposed to infection. The actual mortality from plague in the whole presidency calculated on the total population, which of course includes a very large percentage who have not been exposed to infection, came to 8·3 per 1,000.

The immunity of prisoners in jails is a valuable testimony to the efficacy of inoculation. In Sábarmati Jail 1,715 persons were inoculated: there were two attacks and both recovered. In Hyderabad Jail one fatal case occurred before inoculation; 1,747 inoculations were done and no case occurred subsequently. In Dhulia Jail, in which 1,408 persons were inoculated, there were no cases of plague. In all these places plague was severely epidemic among the free population living in the cities.

From Native States 145 attacks among inoculated persons were reported. The case mortality among those attacked in the incubation period was 56·4 per cent.: among those attacked subsequently 25 per cent.

69. The mortality from plague in 1917 need not give rise to pessimism if the lessons taught are taken to heart. The epidemic has once more brought into prominence the importance of the persistence of infection in the hot weather, the danger of uncontrolled evacuation of infected towns, and the practical certainty of the infection of towns and villages connected with the supply of food-grains. If these three factors are eliminated plague will lose its sting. The work done under the Plague Commission, supplemented as it has been by the investigation conducted in Poona under the Indian Research Fund, has shown in no uncertain manner the methods for attacking plague. Given popular co-operation and the provision of necessary funds plague can undoubtedly be harnessed, and very probably banished.

Small-pox.

70. Three thousand and ninety-five deaths were registered as compared with 3,289 in 1916 and a decennial mean of 4,382. A death-rate of ·16 was recorded against ·17 in 1916 and a quinquennial mean of ·26. Deaths among males were 1,547 and among females 1,548.

The annual mortality since 1906 is given below:—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1906 ...	4,063	1910 ...	4,600	1914 ...	4,209
1907 ...	1,862	1911 ...	4,727	1915 ...	1,425
1908 ...	2,526	1912 ...	6,331	1916 ...	3,289
1909 ...	5,019	1913 ...	9,833	1917 ...	3,095

71. *Distribution.*—For details, *vide* Form VIII. At the end of 1916 the disease was widespread, and in 1917 all the districts with the exception of two in Sind were infected.

During the year under report the highest death-rates were recorded in Bombay City (1·27) and in the districts of Surat (·75), Kolába (·71), Broach (·40), Thána (·28) and Ahmedabad (·25).

72. One thousand one hundred and sixty-one attacks of small-pox were investigated during the year by the Officers of the Department. Of these, 525 were among the vaccinated, of whom 34 died. The mortality was chiefly among those either with no marks of vaccination or with bad marks. Of the 636 cases among the unvaccinated 122 died. The average age of vaccinated persons attacked by small-pox was 16 against 8 for the unvaccinated persons, and the average age of the vaccinated persons fatally attacked was 14 against 5 for unvaccinated persons.

Respiratory Diseases.

73. Ninety thousand six hundred and sixty-seven deaths (48,120 males and 42,547 females) were registered as compared with 79,882 in 1916 and a decennial mean of 61,684. The death-rate was 4·63 against 4·08 in 1916 and 3·47, the mean of previous 5 years.

The annual number of deaths registered since 1906 is given in the following table :—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1906	60,615	1910	59,880	1914	65,941
1907	58,068	1911	51,470	1915	63,364
1908	54,671	1912	70,712	1916	79,882
1909	53,433	1913	59,418	1917	90,667

74. In rural areas the death-rate was 3·70 against one of 9·44 for urban areas. The highest death-rates for urban areas were recorded in Ahmedabad (20·09), Kaira (17·68), Poona City (15·09), Broach (14·57), Kapadvanj (14·02), Mirpurkhas (13·39), Borsad (11·89), Umreth (11·72), Dákor (10·92), Jambusar (10·79), Kirkee Cantonment (10·54), Surat (10·53), Yeola (10·20), Viramgám (9·73), Hyderabad (9·70), Násik (9·56), Nadiád (9·50), Ahmednagar (9·45), A'nand (9·27), Ránder (8·89), Dhandhuka (8·46).

It will be noted that 14 of the 21 towns are in Gujarát, where the urban population lives in densely crowded unventilated houses. An analysis of the causes of deaths under respiratory diseases in Poona City is of interest. Seven hundred and fifty-three persons are said to have died of pneumonia, 353 of phthisis, 216 of bronchitis and 55 of whooping cough. Nine hundred and twenty-three out of the 1,024 deaths from pneumonia, bronchitis and whooping cough were in children under 5.

75. *Phthisis.*—In Gujarát Registration District, 4,222 deaths from phthisis were recorded (2,410 males and 1,812 females) against 3,934 (2,216 males and 1,718 females) in 1916, the death-rate being 1·51 against 1·40 in 1916. The urban death-rate was 3·34 against one for rural areas of 1·02 as compared with 3·28 and ·90, respectively, in 1916.

The principal urban death-rates are given in the following table :—

Towns.	Total death-rate.	Male death-rate.	Female death-rate.
Ahmedabad	4·35	4·08	4·67
Dhandhuka	2·49	3·94	1·18
Viramgám	2·45	3·28	1·63
Dholka	3·58	4·74	2·44
Kaira	2·74	3·80	1·62
Mehmedabad	2·37	3·03	1·64
Nadiád	2·84	2·02	3·76
Dákor	2·44	3·28	1·42
Kapadvanj	5·33	6·08	4·66
Broach	3·34	2·74	4·00
Jambusar	1·44	1·97	·90
Surat	4·07	3·66	4·51
Ránder	3·18	2·79	3·53

The female death-rate exceeded the male death-rate in 5 towns (Ahmedabad, Nadiád, Broach, Surat and Ránder). The same fact was noted last year. In these towns the excess of female deaths is entirely among Mahomedan women. Among other castes the number of male and female deaths is nearly equal.

76. In the Southern Registration District, 1,666 deaths from phthisis were registered against 1,624 in 1916. The death-rate was ·51 against ·50 in 1916. The urban death-rate was 1·35 against one of ·42 for rural areas as compared with 1·24 and ·41 respectively in 1916. Death-rate of over 1 per mille of population was recorded in the following towns :—

Ilkal (2·44), Navalgund (2·41), Gokak (2·32), Ránebennur (2·10), Nipáni (1·95), Belgaum (1·94), Gokarn (1·89), Bijápur (1·89), Bágalkot (1·68), Athni (1·37), Bhatkal (1·23), Dhárwár (1·16), Gadag-Bettigeri (1·15) and Hubli (1·11).

77. In the Central Registration District, 4,295 deaths from phthisis were registered against 3,558 in 1916. The death-rate was ·85 against ·70 in 1916. The urban death-rate was 1·69 against one of ·76 for rural areas as compared with 1·39 and ·63, respectively, in 1916. The highest number of deaths (2,107)

were reported from Ratnágiri District as in last year. The highest urban death-rates were recorded in Sátára (4·50), Nagar (3·93), Poona City (2·81), Chiplun (1·45), Ratnágiri (1·26), Junnar (1·13), Poona Cantonment (1·74) and Kirkee Cantonment (1·44).

78. In the Western Registration District, 2,371, deaths were registered, the death-rate being ·59. The urban death-rate was 1·07 against one of ·54 for rural areas. The highest urban death-rates were recorded in Alibág (4·47), Bhiwndi (2·78), Thána (2·56), Erandol (2·43), Násik (2·26), Bassein (2·08), Mahád (1·81), Uran (1·60), Manmád (1·58), Bándra (1·48), Panvel (1·42) and Dhulia (1·36).

79. In Sind 538 deaths from phthisis were registered against 552 in 1916. Of these, 488 or over 88 per cent. were recorded in Karáchi and Hyderabad Towns.

80. In rural areas phthisis is actually more prevalent in the Konkan districts than in those above-ghâts. This is accounted for in two ways. First mill-hands who have acquired the disease in the Bombay mills return to their homes in the Konkan to die. Secondly, the population in these areas suffer from impaired vitality caused by endemic malaria and are not fit to withstand the infection so introduced. The fact must be realised that the rural population of the Konkan is gradually becoming extensively infected with phthisis.

Injuries.

81. There were 7,650 deaths recorded, of which 4,314 were among males and 3,336 among females. The number registered in 1916 was 8,096 and the decennial mean was 7,404.

The number of deaths registered annually as due to injuries since 1906 is shown below :—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1906 ...	6,830	1909 ...	7,029	1912 ...	7,175	1915 ...	8,113
1907 ...	6,799	1910 ...	6,885	1913 ...	7,711	1916 ...	8,096
1908 ...	7,109	1911 ...	7,452	1914 ...	7,670	1917 ...	7,650

82. Deaths by sexes are arranged under the various heads and compared with those in 1916 in the following table :—

Causes.	1917.			1916.		
	Male.	Female.	Total.	Male.	Female.	Total.
Drowning	1,249	1,702	2,951	1,346	1,780	3,126
Poisoning	99	52	151	124	52	176
Hanging	145	66	211	154	75	229
Wounding	904	437	1,341	927	451	1,378
Wild beasts	40	8	48	25	9	34
Snake-bite	901	516	1,417	962	559	1,521
Rabies	197	99	296	191	106	297
Railway accidents	99	21	120	84	14	98
Other causes	680	435	1,115	730	507	1,237
Total ...	4,314	3,336	7,650	4,543	3,553	8,096

83. One thousand four hundred and seventeen deaths were attributed to snake-bites against 1,521 in 1916. The highest number occurred in Ratnágiri (216), Thána (162), Sátára (91), Thar and Párkar (89), Hyderabad (68) and Nawábsháh (66), while only three were reported from the city of Bombay.

In the Southern Registration District, in 43 cases investigated, the snake was identified as a cobra and in these the interval between the bite and death varied from 10 minutes to 14 hours. Five fatal cases were reported to have been treated with permanganate of potash.

84. Two hundred and ninty-six deaths were reported from rabies (197 males and 99 females). The highest number (51) was reported from Kaira District. Among towns the highest number (15) was returned from Ahmedabad.

85. There were 521 suicidal deaths (292 males and 229 females) against 539 (296 males and 243 females) in 1916.

The highest number of suicides were reported from Bombay City (62), Bijápur District (48), Thána District (47), Dhárwár District (43), and Belgaum District (39). Of the 62 deaths in Bombay City, 9 were the result of drowning, 27 of poisoning, 10 of hanging and 16 of wounding; of the 48 deaths in Bijápur District 16 were the result of drowning, 1 of poisoning and 31 of hanging; of the 47 deaths in Thána District 16 were the result of drowning, 1 of poisoning, 25 of hanging and 5 of wounding; of the 43 deaths in Dhárwár District 23 were the result of drowning, 1 of poisoning, 18 of hanging and 1 of wounding; of the 39 deaths in Belgaum District 8 were the result of drowning, 5 of poisoning and 26 of wounding.

Other Causes.

86. One hundred and eighty-one thousand eight hundred and seventy-seven (91,742 males and 90,135 females) deaths were registered as compared with 165,382 in 1916 and the decennial mean 141,702.

The death-rate was 9·29 against 8·44 in 1916 and a quinquennial mean of 7·75.

The annual number of deaths registered under this heading since 1906 is as follows:—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1906 ...	142,478	1910	149,735	1914	159,720
1907 ...	124,575	1911	130,871	1915	138,006
1908 ...	124,275	1912	162,143	1916	165,382
1909 ...	128,495	1913	139,815	1917	181,877

87. *Measles.*—In the Southern Registration District, 2,676 deaths were recorded from measles against 1,349 in 1916. Two thousand two hundred and sixty-eight were in rural circles and 408 in town circles.

The highest urban death-rates were recorded in Ilkal (12·31), Ránebennur (3·20), Dhárwár (1·67), Hubli (1·20), Gadag-Bettigeri (1·15) and Bágalkot (1·10). The greatest mortality was in the first quarter of the year.

In the Gujarát Registration District, 603 deaths were registered against 4,048 in 1916; 179 of the deaths were reported from Surat City.

In the Central Registration District, 957 deaths were recorded against 1,287 in 1916.

In Sind, 42 deaths were recorded against 897 in 1916.

Except in the Southern Registration District, the incidence of the disease was much lighter than in 1916.

88. The number of deaths from chief diseases occurring in each collectorate, by months, are shown in Annual Forms Nos. VII to XII.

SECTIONS VII and VIII.—No remarks.

SECTION IX.

SANITARY WORKS—CIVIL.

89. The combined income of the 156 municipalities in the Presidency and Sind came to Rs. 1,29,33,420; of which Rs. 65,10,097 were raised by taxation. The incidence of taxation per head of population averaged Rs. 2·8 against Rs. 2·6 in 1916; and varied between Rs. 11·5 for Karáchi City to just over 5 annas for Ghatkopar-Kirol in Thána District. Karáchi City with a population less than 7 per cent. of the total municipal population provided over 14 per cent. of the aggregate income. In Bombay City practically Rs. 8 per head of population is spent on public health and convenience. In the mofussil municipalities 24 per cent. of the total income was spent on public health measures, that is, considerably less than one rupee per unit of population. Bombay City should be, and undoubtedly is, an example to the mofussil municipalities of public health administration; but it is idle to expect any real advance in the mofussil such as has taken place in Bombay City until there can be a narrowing of the wide divergence between the respective sums available for public health expenditure.

With public health measures hampered by lack of funds the incidence of epidemic disease in municipalities must naturally be high. In 1917, 134 of the 156 municipalities suffered from an epidemic of plague; 52 from an epidemic of small-pox and 39 from an epidemic of cholera. These three diseases are readily preventable and the measures taken will reduce the mortality from other causes. It is for municipalities to decide if the certain saving of life will justify them in raising the necessary funds. The urgent need for action is shown by the figures of the following table in which the death-rates for populations in municipal areas in each district are given :—

Statement showing, by districts, combined Birth and Death rates for Municipalities in the Bombay Presidency during the year 1917.

Districts.	No. of Municipalities.	Ratio of Births per 1,000 of Population.	Ratio of Deaths per 1,000 of Population.					Remarks.
			Cholera.	Small-pox.	Plague.	From all causes.	Total excluding Plague.	
Ahmedabad ...	10	41·16	·00	·37	24·86	69·70	44·84	
Kaira ...	9	46·21	·00	·87	5·80	42·97	37·17	
Panch Maháls ...	2	31·59	·00	·45	11·59	34·20	22·61	
Broach ...	3	43·54	·00	·00	·77	31·50	30·73	
Surat ...	3	30·12	·00	2·09	16·66	49·96	33·30	
Thána ...	8	22·87	·02	·55	5·00	12·71	7·71	
Ahmednagar ...	4	21·80	...	1·03	26·95	53·63	26·64	
East Khándesh ...	11	35·26	·01	·27	26·16	52·85	26·69	
West Khándesh ...	7	30·47	...	·33	17·76	38·67	20·90	
Násik ...	6	27·04	·01	·02	29·61	58·79	21·89	
Poona ...	12	17·40	·19	·68	12·72	54·15	41·43	
Sátára ...	12	26·26	·15	·42	23·32	48·95	25·63	
Sholápur ...	5	25·33	1·18	0·05	15·09	47·48	32·39	
Belgaum ...	5	32·19	3·11	·03	9·57	37·28	27·71	
Bijápur ...	4	29·46	3·51	·03	16·96	49·73	32·77	
Dhárwár ...	10	41·34	3·69	·02	7·96	43·78	35·82	
Kánara ...	8	33·57	2·12	...	2·37	32·04	29·67	
Kolába ...	7	22·49	·10	·70	7·61	31·20	23·59	
Ratnágiri ...	3	24·73	·07	·54	2·99	24·52	21·54	
Karáchi ...	5	41·07	·10	·10	7·35	48·09	40·74	
Hyderabad ...	6	22·19	...	...	9·69	53·64	43·95	
Sukkur ...	5	33·92	2·00	·35	3·45	71·39	67·94	
Lárkána ...	5	35·28	·08	·03	·08	60·30	60·22	
Nawábsháh ...	2	18·15	...	...	·63	31·73	31·10	
Thar and Párkar ...	2	15·68	...	...	·34	44·41	44·08	
Upper Sind Frontier ...	1	19·93	1·50	...	2·91	43·92	41·01	

In 17 districts out of a total of 26 the deaths in municipal areas exceeded 40 per 1,000 of population. Excluding the municipalities in Sind and in Poona and Ahmedabad Districts the mortality would have fallen below 40 but for plague.

In some municipalities attention is being paid to conservancy; this is perhaps specially evident in Gujarát where the Commissioner, Northern Division, has brought to the notice of municipalities a standard conservancy scheme drawn up by the Deputy Sanitary Commissioner. With the existing scarcity of funds it is important that money should be realised by the sale of manure. The Násik system of disposal, which has now been adopted in many towns in Gujarát, produces a valuable manure. Unfortunately there is not a ready sale owing to the prejudices of the cultivators. Demonstration of the value of this manure is indicated, and it may be that this can best be attained by municipal farms on which fodder and grain for municipal cattle could be grown.

Advice was given by Deputy Sanitary Commissioners to 39 municipalities in the Presidency (excluding Sind) :—Máhim, Kelve, Bassein and Thána in Thána District; Igatpuri, Yeola and Násik in Násik District; Dhulia in West Khándesh District; Ghodnadi, Indápur, Lonávala, A'landi and Poona in Poona District; Karmála, Bársi, Pandharpur and Sholápur in Sholápur District and Mhasvad in Sátára District; Háveri, Ránebennur and Byádgi in Dhárwár District and Haliyál in Kánara District; Belgaum in Belgaum District; and Bágalkot in Bijápur District; Bulsár and Surat in Surat District; Broach in Broach District; Kaira, Mehmedabad, Nadiád, Mahudha, A'nand, Kapadvanj and Dákor in Kaira District; Godhra in Panch Maháls District; and Ahmedabad, Viramgám, Prántij and Dholka in Ahmedabad District. Many of the municipalities have taken some action on the reports, but much more is needed if the liability to epidemics is to be avoided in future.

During the year first class health officers were employed in the cities of Ahmedabad, Karáchi, Poona and Surat; second class officers in Bándra and Broach; and one third class officer in Nadiád. The appointment of health officers to other towns was prevented by the lack of suitable candidates owing to war conditions.

Forty trained Sanitary Inspectors were employed in 20 towns. Eight Inspectors worked in Ahmedabad, 5 in Poona, 4 in Sholápur and Surat; 2 in Broach, Hubli and Karáchi: and one in Násik, Dhulia, Kurla, Bándra, Godhra, Viramgám, Belgaum, Gadag, Bijápur, Bágalkot, Sukkur, Lárkána and Pandharpur.

90. For details regarding progress in water-supply and drainage projects reference is invited to the report of the Sanitary Board published as an appendix.

91. Little progress was made during the year on improvement schemes. In Kotri hollows were filled up with the aid of a Government grant; this has resulted in material benefit. The Health Officer of Karáchi reports that the filling in of the bed of the Lyari river has reduced the mosquito nuisance. Unfortunately funds have not been available for connecting the houses in Civil lines and Frere Town with the newly laid sewers. Very little progress was made towards the completion of the Gandhi Bazar scheme in Broach. The Surat Municipality has definitely decided to proceed with the Nagada Tekra Scheme. The future development of Sálsette was aided by a grant of Rs. 50,000.

92. The Analyst to the Sanitary Board conducted much useful work. A regular examination of samples of the Poona City and Cantonment water-supplies was made. A chart has been drawn up which shows clearly that during the three years in which the city supply has been treated with bleaching powder the deaths from dysentery and diarrhœa have been reduced by 54 per cent. as compared with the 3 years prior to treatment. Samples relating to the water-supplies of Kirkee, Dhulia, Dhárwár and Sholápur; to the effluents from the Septic tank for the city and from the distillery at Khánápur were examined at regular intervals.

Arrangements to treat the Kirkee supply with bleaching powder were made during the year; and alum was used for the first time during the

monsoon to clear the Poona City supply. The alum treatment was very successful, but the municipality are unwilling to bear the expense. The Poona Cantonment water-works were managed efficiently during the year, and the European bacterial standard of purity was maintained. Unfortunately during the monsoon the water delivered at the taps is bacterially inferior to the water in the service reservoir. The Health Officer, Karáchi Municipality, treated the municipal water-supply with bleaching powder, but the arrangements are only temporary.

The provision of laboratories for the regular examination of water-supplies for other towns has been postponed on account of the war.

93. The combined income of the District and Táluka Local Boards was Rs. 86,03,638. The incidence of income per head was 7·5 annas against 6·9 in 1916. Just over 3 per cent. of the income was spent on public health measures, and close on 25 per cent. was devoted to improving communications.

Under Government Resolution, General Department, No. 3653 of 28th May 1917, the grant of Rs. 7 lákhs made by the Government of India was placed at the disposal of the Commissioners of Divisions for distribution among the District Local Boards of the Presidency and Sind; the sums are incorporated in the general revenues and are used to improve communications, water-supplies and objects other than educational. The distribution was as shown below:—

		Rs.
Northern Division	...	... 1,82,000
Central Division	...	... 2,08,000
Southern Division	...	... 1,56,000
Sind Division	...	... 1,54,000

Under Government Resolution, General Department, No. 2005 of 26th March 1917, a grant of Rs. 62,000 was made for improvement of village water-supplies and it was distributed as follows:—

		Rs.
Northern Division	...	... 20,000
Central Division	...	... 20,000
Southern Division	...	... 10,000
Sind Division	...	... 12,000

These were supplemented by grants from Local Funds and popular contributions and were expended in making new tanks and deepening existing tanks, constructing new wells, boring operations, repairing old wells, building troughs and cisterns and closing step-wells. Three hundred and seventy-one step-wells were converted into draw-wells during the year: of these 216 were in Belgaum District, 74 in Ahmednagar District and 38 in Poona District.

94. Some progress has been made in the extension of village sites for the relief of overcrowding. Land was acquired for 3 villages in Ahmedabad District, 4 in Kaira District, 2 in Poona District, 1 in West Khándesh District, 2 in East Khándesh District, 5 in Dhárwár District, 9 in Bijápur District and 1 in Ratnágiri District. In addition extension is under consideration in the case of 37 villages in Bijápur District, 2 in Kánara District, 5 in Dhárwár District, 1 in Broach District and 1 in Sholápur District.

95. Twenty-six Notified Area Committees, exclusive of 6 in Thána District and 4 recently created in Ahmedabad District for regulations of buildings, worked during the year. The Sanitary Committee at Dondaicha (West Khándesh) and at Jámner (East Khándesh) were converted into Notified Area Committees during the year.

The total population served by Notified Area Committees during the year was 123,513 and the total income excluding opening balance came to Rs. 1,84,928, giving an incidence of income per head of Rs. 1·4.

The two following tables give respectively the details of income and expenditure, and the combined birth and death rates per district:—

Statement showing Income and Expenditure of the Notified Area Committees during the year 1917-1918.

Districts.	Serial No.	Names of towns and villages.	Population.	Income including opening balance.	Expenditure.	Closing Balance.
				Rs.	Rs.	Rs.
Ahmedabad ...	1	Kankaria* ...	.....	.....	.....	.....
	2	Elis Bridge* ...				
	3	Sábarmati* ...				
	4	Asarva* ...				
Broach ...	1	Palej ...	4,255	5,088	3,143	1,945
Thána ...	1	Andheri ...	3,740	39,178	31,013	8,165
	2	Borivli ...	4,577	12,771	11,922	849
	3	Málád ...	3,887	10,353	5,904	4,449
	4	Santa Cruz ...	1,072	31,076	23,927	7,149
	5	Vile-Padle ...	4,820	16,239	6,703	9,536
East Khándesh ...	1	Chálisgaon ...	9,453	30,553	17,215	13,338
	2	Páchora ...	5,461	8,661	5,079	3,582
West Khándesh ...	1	Dondaicha-Warwada ...	3,640	2,527	622	1,905
Násik ...	1	Nándgaon ...	6,961	11,935	8,620	3,315
	2	Manmád ...	3,495	15,569	6,843	8,726
Poona ...	1	Dhond ...	3,112	11,059	3,084	7,975
Sholápur ...	1	Kurduwádi ...	5,760	6,485	1,757	4,728
	2	Mádha ...	5,306	3,844	3,291	553
	3	Málsiras ...	2,400	1,421	717	704
Belgaum ...	1	Chikodi ...	6,897	6,705	2,557	4,148
	2	Khánápur ...	4,280	1,959	1,510	449
	3	Bail-Hongal ...	9,610	9,241	4,940	4,301
Bijápur ...	1	Indi ...	5,000	453	334	119
	2	Muddebihál ...	4,055	2,903	2,450	453
	3	Hungund ...	6,441	2,411	2,290	121
Dhárwár ...	1	Hirekerur ...	3,240	2,586	1,202	1,384
	2	Hángal ...	4,898	2,424	2,053	371
Kolába ...	1	Karjat ...	1,781	5,036	2,432	2,604
Ratnágiri ...	1	Rájápur ...	6,349	14,743	12,320	2,423
	2	Dápoli ...	3,023	4,692	3,749	943
		Grand Total ...	123,513	2,59,913	1,65,677	94,236

*Created to regulate buildings. Collected no funds.

Statement showing, by Districts, Combined Birth and Death rates for Notified Areas in the Bombay Presidency during the year 1917.

Districts.	No. of Notified Areas.	Ratio of Births per 1,000 of Population.	Ratio of Deaths per 1,000 of Population.					Remarks.
			Cholera.	Small-pox.	Plague.	From all Causes.	Total excluding Plague.	
Ahmedabad ...	4*	...	...	...	...	...	...	
Broach ...	1	12·93	...	...	7·52	34·08	26·56	
Thána ...	11*	21·89	...	·51	2·25	23·68	21·43	
East Khándesh ...	2	31·03	...	...	13·83	40·39	26·56	
West Khándesh ...	1	30·39	...	...	44·12	67·62	23·49	
Násik ...	2	14·45	...	...	17·97	36·16	18·19	
Poona ...	1	13·34	...	...	25·11	40·63	15·52	
Sholápur ...	3	17·40	0·13	...	7·12	20·69	13·57	
Belgaum ...	3	36·12	5·77	·14	9·04	39·20	30·16	
Bijápur ...	3	38·38	5·97	·07	8·79	46·97	38·18	
Dhárwár ...	2	42·16	·12	...	7·27	37·60	30·33	
Kolába ...	1	16·43	4·11	2·05	10·27	39·70	29·43	
Ratnágiri ...	2	6·69	...	...	...	4·01	4·01	

*Four Notified Area Committees in Ahmedabad Collectorate and six in Thána District supervise building operations. They have not collected any funds.

Useful works of improvement were carried out or carried a stage forward by many of these Committees. For instance, conservancy was improved by Committees in Sálsette (Thána District), by Páchora (East Khándesh District), Málsiras (Sholápur District) and Hángal (Dhárwár District). Drains were improved or steps taken to improve them by the Committees at Nándgaon (Násik District), Hángal (Dhárwár District) and Muddebihál (Bijápur District). The Chikodi Committee (Belgaum District) has several proposals under consideration.

Advice on public health matters was given to 6 Committees during the year by Deputy Sanitary Commissioners :—Mánmad (Násik District), Dhond

(Poona District), Kurduwádi (Sholápur District), Hángal and Hirekerur (Dhárwár District) and Bail-Hongal (Belgaum District).

96. The following statement shows the account of the two village Sanitary Boards which worked during the year :—

Statement showing, by Districts, the Income and Expenditure of the Village Sanitary Boards in the Bombay Presidency during the year 1917.

Districts.	No. of Sanitary Boards.	Names of villages.	Total Income including Opening Balance.	Popular Contributions.	Total Expenditure.	Closing Balance.	Remarks.
			Rs.	Rs.	Rs.	Rs.	
Kánara ...	1	1 Kondli 2 Balikop 3 Hosur	666	125	359	307	
Surat ...	1	1 Chikhli 2 Samroli.	1,458	322	607	851	

The Sanitary Board for 3 villages in Kánara carried out repairs to the Kashihond tank in Kondli and to the Dispensary well and propose repairs to roads and wells and to the Holarhond tank and construction of a foot-path from Kondli to Siddápur.

97. Four hundred and fifty-three Sanitary Committees worked during the year against 399 in 1916.

In the Northern Division 6 new Committees were formed: 2 (Eroo and Kharsad) in Surat District, 2 (Kahanva and Kareli) in Broach District and 2 (Ras and Devol) in Kaira District.

In the Central Division 7 new Committees were created: 2 (Mamdapur and Shirdi) in Ahmednagar District, 2 (Chinawal and Lohore) in East Khándesh District, 1 (Yelur) in Sátára District, and 2 (Mulher and Taharabad) in Násik District.

In the Southern Division 33 new Committees were formed: 4 (Kittur, Mugutkhan Hubli, Yeksambe and Kabbur) in Belgaum District, 9 (Motebennur, Halgeri, Devgeri, Bankápur, Hurli-Kuppi and Hebsur, Byáhatti, Sortur and a joint Sanitary Committee for Bengeri, Gopankop and Devanagpet) in Dhárwár District, 4 (Atharga, Hippargi, Kolhar and Kerur) in Bijápur District and 16 (Toloje, Sai, Apte, Dasgaon, Nate, Wawoor, Birwádi, Khálápur, Chowk, Khopoli, Kolád, Nágothna, Gadab, Kasu, Kashele and Revdanda) in Kolába District.

In Sind 10 new Committees were created: 2 (Mohata and Dero) in Lárkána District, 2 (Khanwahan and Defarja) in Nawábsháh District, 1 (Jamesabad) in Thar and Párkar District, 4 (Khudai, Abral, Maghiladho and Jiand Zungagi) in Karáchi District, 1 (Ranwti) in Sukkur District.

Detailed information regarding the income and expenditure and the birth and death rates for the population under the administration of Sanitary Committees is given in the two following tables :—

Statement showing, by Districts, the Income and Expenditure of the Sanitary Committees in the Bombay Presidency during the year 1917.

Districts.	Number of Sanitary Committees.	Total Income including Opening Balance.	Popular Contributions.	Total Expenditure.	Closing Balance.	Remarks.
		Rs.	Rs.	Rs.	Rs.	
Ahmedabad	8	9,228	2,924	5,488	3,740	
Kaira	25	31,878	8,087	13,229	18,649	
Panch Mahals	5	9,513	2,153	5,443	4,070	
Broach	25	24,242	6,129	11,299	12,943	
Surat	16	15,199	5,103	11,912	3,287	
Thána	7	13,249	1,970	5,307	7,942	
Total, Northern Division ...	86	1,03,309	26,366	52,678	50,631	

Districts.	Number of Sanitary Committees.	Total Income including Opening Balance.	Popular Contributions.	Total Expenditure.	Closing Balance.	Remarks.
		Rs.	Rs.	Rs.	Rs.	
Ahmednagar	18	18,544	5,046	10,491	8,053	
East Khándesh	13	41,156	8,581	27,263	13,893	
West Khándesh	8	13,687	2,332	5,637	8,050	
Násik	18	20,296	3,806	8,671	11,625	
Poona	3	3,738	323	778	2,960	
Sátára	16	9,492	2,927	5,697	3,795	
Sholápur	3	2,885	605	1,567	1,318	
Total, Central Division ...	79	1,09,798	23,620	60,104	49,694	
Belgaum	30	26,182	7,272	12,209	13,973	
Bijápur*	12	12,962	2,565	4,331	8,631	* Two Committees have not collected any funds.
Dhárwár	37	31,844	7,683	16,011	15,833	
Kolába†	25	3,562	772	1,851	1,711	† Sixteen Committees were newly formed. They have collected no funds.
Ratnágiri	2	5,247	1,866	3,961	1,286	
Total, Southern Division‡ ...	106	79,797	20,158	38,363	41,434	‡ There are no Sanitary Committees in the Kánara Collectorate.
Karáchi	36	26,028	5,064	10,869	15,159	
Hyderabad	21	26,852	4,759	10,300	16,553	
Sukkur	19	13,300	3,878	10,595	2,705	
Lárkána	48	33,155	6,540	19,268	13,887	
Nawábsháh	26	28,624	5,798	15,096	13,528	
Thar and Párkar ...	23	31,247	5,326	13,519	17,728	
Upper Sind Frontier ...	9	12,487	2,362	8,769	3,718	
Total for Sind ...	182	1,71,694	33,727	88,416	83,278	
Grand Total ...	453	4,64,598	1,03,871	2,39,561	2,25,037	

Statement showing, by Districts, combined Birth and Death rates for Sanitary Committees in the Bombay Presidency during the year 1917.

Districts.	Number of Sanitary Committees.	Ratio of Births per 1,000 of Population.	Ratio of Deaths per 1,000 of Population.					Remarks.
			Cholera.	Small-pox.	Plague.	From all Causes.	Total excluding Plague.	
Ahmedabad ...	8	34·23	·04	·16	21·26	54·18	32·92	
Kaira ...	25	38·38	...	·13	2·99	29·82	26·83	
Panch Maháls ...	5	54·10	...	...	1·86	33·68	31·82	
Broach ...	25	42·51	...	·49	2·92	34·02	31·10	
Surat ...	16	40·37	...	·46	6·82	33·80	26·98	
Thána ...	7	32·10	...	·40	·31	23·05	22·73	
Ahmednagar ...	18	29·64	·13	·16	6·94	32·41	26·46	
East Khándesh ...	13	45·04	...	·79	19·89	52·24	32·86	
West Khándesh ...	8	41·60	·02	·01	45·66	72·24	26·37	
Násik ...	18	36·78	...	...	24·55	54·83	30·28	
Poona ...	3	23·42	...	·26	24·45	39·42	15·47	
Sátára ...	16	30·37	·95	...	32·06	53·53	21·11	
Sholápur ...	3	22·98	1·59	...	18·70	52·94	34·14	
Belgaum ...	30	38·32	7·22	...	18·36	56·75	48·39	
Bijápur ...	12	31·07	4·62	...	12·66	49·60	36·94	
Dhárwár ...	37	42·77	3·93	...	9·29	42·19	32·90	
Kánara ...	...	...	...	...	...	...	...	
Kolába ...	25	60·68	...	...	...	29·90	29·90	
Ratnágiri ...	2	25·92	1·003	·15	...	23·43	23·43	
Karáchi ...	36							
Hyderabad ...	21							
Sukkur ...	19							
Lárkána ...	48		Not received.					
Nawábsháh ...	26							
Thar and Párkar ...	23							
Upper Sind Frontier ...	9							

Plague was epidemic in 207 villages: cholera in 74 and small-pox in 45. It is not unreasonable to hope that the day is not far distant when the village pump, which has done so much for the rural population of England, will be widely instituted in rural areas in this Presidency. The obstacles apparently

are the liability of such pumps to get out of order, and the local absence of facilities for repairs. Under these circumstances demonstrations on methods of water-lifting, such as the one which has recently been held at the Poona Agricultural College under the Agricultural Engineer, are to be welcomed, and should be attended by those responsible for public health administration as well as by those interested in agriculture. Sanitary Committees can do much to limit the spread of plague by enforcing simple rules regarding the admission of visitors from infected areas. Many villages have done this on their own initiative and have escaped epidemics. In the case of small-pox members of Sanitary Committees should use their influence in overcoming the opposition of the people to revaccination.

Thirty villages under Sanitary Committees were visited by Deputy Sanitary Commissioners during the year. These villages are scattered over a wide area, and only a few can receive a visit from the Deputy Sanitary Commissioners in the course of one year, but practically all are inspected by the Inspectors of Sanitation and Vaccination.

Many Sanitary Committees carried out useful work in removal of refuse, repairs to wells and roads, construction of gutters and destruction of prickly-pear.

The following Committees have been specially mentioned for work during the year :—Radhu and Dabhan in Kaira District; Kálol, Jhálod and Limdi in Panch Maháls District; Vágra, A'mod and Tankária in Broach District (in addition 9 Village Committees in this district have joined the Sanitary Association); Umbergaon and Targaon in Thána District; Nátepute, Akluj and Kasegaon in Sholápur District; Párner and Ráhuri in Ahmednagar District; Shirála in Sátára District; Ghoda in Poona District; Bodvad, Páldhi and Bhadgaon in East Khándesh District; Pimpalner in West Khándesh District; Huli, Sadalge and Kabbur in Belgaum District; Chikkerur and Karajgi in Dhárwár District; Bágevádi in Bijápur District; Sujawal, Mirpur Bathoro and Gharo in Karáchi District; Kandiaro, Mahrabpur, Moro and Daulatpur in Nawábsháh District; Johi in Lárkána District and Kashmore in Upper Sind Frontier.

A Special Sanitary Inspector was employed throughout the year to watch the health of villages in the neighbourhood of Deoláli Cantonment. The Senior Medical Officer, Deoláli, has expressed his appreciation of the value of the work done.

98. A Sanitary Association was started at Nadiád in Kaira District during the year. Eight such Associations are now working in the Presidency and their influence will undoubtedly be felt.

99. Apart from a limited outbreak of cholera in Ratnágiri District caused by the infection of pilgrims returning by road from the Maghi Festival at Pandharpur the great fairs of 1917 passed off without incident. The fairs are receiving increasing attention from the Officers of the Sanitary Department.

Section X.

100. The Deputy Sanitary Commissioners during the year visited 797 towns and villages. In addition to special reports remarks were made in 60 Village Sanitation Books. The Inspectors of Sanitation and Vaccination entered remarks in 249 books.

All Deputy Sanitary Commissioners showed great zeal in the discharge of their useful duties. The Deputy Sanitary Commissioner, Western Registration District, visited 49 towns and villages for public health purposes, and 129 for vaccination.

The Deputy Sanitary Commissioner, Southern Registration District, inspected the public health condition of 54 towns and villages and the vaccinal condition of 130.

Twenty-three towns and villages received advice in public health matters from the Deputy Sanitary Commissioner, Central Registration District, who also checked vaccination in 134 villages. This Officer visited Pandharpur at the time of the four principal fairs.

The Deputy Sanitary Commissioner, Gujarát Registration District, was appointed Senior Health Officer, Ahmedabad City Municipality, with a view to coping with the epidemic of plague in addition to his routine work. He visited 17 towns and villages for public health purposes and 79 for vaccination.

The Deputy Sanitary Commissioner, Sind Registration District, visited 23 towns and villages for sanitation and 159 for vaccination purposes.

During the course of the past 3 years 2,373 schools have been inspected. It was found that in 1,242, or just over 50 per cent., the floor space per pupil was 10 sq. ft. or over. The floor space per pupil in 491 was between 8 and 10 sq. ft. in 498 between 5 and 8 sq. ft. and in 142 below 5 sq. ft. In only 450 schools were arrangements found for top ventilation.

Under regulations issued by Government new schools must be constructed according to standard; it is to be hoped that every possible effort will be made also to improve existing schools.

The Sanitary Commissioner visited 30 towns during the year in connection with epidemics and for general public health purposes. At the request of the Commissioner in Sind a public health demonstration was held in Karáchi last October, at which the Sanitary Commissioner with the Government of India and the Director, Bombay Bacteriological Laboratory, rendered very valuable assistance. On the return journey the Director, Bombay Bacteriological Laboratory, gave a demonstration on plague at Ahmedabad, with a view to assist the municipality in coping with the epidemic.

F. H. G. HUTCHINSON,
M.B., C.M., D.P.H.,
Lieut.-Colonel, I.M.S.,
Sanitary Commissioner.

Poona, 3rd August 1918.

APPENDIX I.

ANNUAL REPORT OF THE SANITARY BOARD, BOMBAY PRESIDENCY, FOR THE YEAR 1917.

During the year under report there was no change in the constitution of the Sanitary Board.

Four meetings of the Board were held during the year and the following important subjects were dealt with :—

(1) The necessity for sinking funds in the case of municipal drainge and water-supply installations.

(2) The limitation of house connections in connection with water-supply projects for towns with a population of less than 10,000 inhabitants.

(3) A Report prepared by the Sanitary Commissioner for the Government of Bombay and the Sanitary Engineer to Government on the principles to be followed in designing latrines.

(4) Consideration of the charges to be levied on local bodies and private individuals for the examination of samples of water, etc., by Government.

2. Out of the grant of Rs. 1 lákh placed at the disposal of the Board for minor sanitary schemes, a sum of Rs. 80,161 was allotted. The Board also decided that no grant should be given unless the plans and estimates had received the prior sanction of the Board.

3. The preparation of the following projects was sanctioned by the Sanitary Board :—

(1) Hyderabad Water Supply.
(2) Viramgam Water Supply.
(3) Jejuri Water Supply.
(4) Nipáni Water Supply.
(5) Wai Water Supply.

4. The projects submitted to and sanctioned by Government were as under :—

(1) Islámpur Water Supply ... ... } Technically approved.
(2) Uran Water Supply ... ... }
(3) Dholka Water Supply.

5. The following amounts were sanctioned by Government as grants-in-aid to certain municipalities in the Presidency :—

		Rs.
(1)	Chemical treatment of Sholápur Water Supply ...	12,292
(2)	Improvements to Panvel Water Works	1,084
(3)	Drain along the Bhágirathi Nála at A'landi	14,264
(4)	Násik Water Supply	16,481
(5)	Aden Water Supply	7,860
(6)	Improvements to suction wells and balancing tank at the central pumping station, Poona Sewerage Scheme ...	2,929

6. The following construction works in connection with water-supply were completed or were in progress during the year :—

Sind.

Karáchi.—Ninety lengths of reinforced concrete pipes were made and the engine-house for well No. 4 was completed. Expenditure Rs. 94,787.

Hyderabad.—The partition wall, sump pit and roofing over the Shahakadam Tank were completed. Expenditure Rs. 22,996.

Northern Division.

Ahmedabad.—Four hundred and fifty-seven feet length of the new central collecting main was laid in the river-bed at a depth of about 35'. Relaying of 2,332 R. ft. of distribution pipes was carried out. One hundred and ninety-nine feet of 12" and 588' of 13" C. I. mains were laid under level crossing on the railway. A length of 1,086' of 4" and 5" connections were laid in Gomtipur and Rakhial and 2,200' of 7" main was also laid from Dudheshwar to Sháhibágh Road. Expenditure Rs. 39,000.

Khárághoda.—A 4" earthenware main connecting the Khárághoda Tank with the deep bore was laid. Expenditure Rs. 3,000.

Surat.—One of the supply wells was unplugged to increase the supply of water. Servants' quarters in the water works compound were erected. Waste water wells attached to service cisterns and stand posts were repaired. Expenditure Rs. 9,867.

Thána.—The Pokhran dam slopes were strengthened and the hillocks in the basin were partially removed by blasting. Expenditure Rs. 1,916.

CENTRAL DIVISION.

Poona City.—The settling tank water was chlorinated throughout the year and alum treatment was tried in July and August. Expenditure Rs. 14,544.

Kirkee Cantonment.—Chlorination of Páshán Tank was carried out during seven months of the year. Expenditure Rs. 4,430.

Sholápur.—The laying of the 15″ gravitation main and the relaying of the old 12″ main from Ekruk Tank to the pumping station were completed. The new suction well was brought into operation. A 10″ connection from the pumping main to the Spry. Reservoir was laid. Expenditure Rs. 31,035.

Bársi.—Laying of the 10″ gravitation main was completed in miles 1 to 5 and 9 to 11. Pipe laying in miles 7 and 8 and trench excavation in miles 6 and 12 were in progress. Expenditure Rs. 87,040.

Ahmednagar.—The earthen dam was raised to R. L. 2,248·00 from chainage 3,210 to 3,400 and from chainage 3,400 to 4,690 the work was completed to finished top level R. L. 2,262·50. From chainage 4,690 to 5,100 the work was raised 7½ feet to R. L. 2,257·50. The masonry of the service reservoir was raised 6′ 6″ in height and two miles of distribution mains were laid. Expenditure Rs. 53,270.

Karád.—The engines and pumps were erected, filtering material was laid in the filters and other minor works were in progress. Expenditure Rs. 27,327.

Vita.—The hand pumps were erected on one of the supply wells at a cost of Rs. 288.

Southern Division.

Ratnágiri.—Renewals and repairs to the distribution system were carried out Expenditure Rs. 972.

Alibág.—The work of improvements to the water-supply at Alibág was practically completed. Some repairs to the pavement of waste weir were carried out. Expenditure Rs. 344.

Pen.—The sluice valve and chambers with covers in connection with improvements to the water-supply at Pen were completed. The roofing of the pure water tank was finished. Expenditure Rs. 1,230.

Roha-Ashtami.—Laying of 4″ diameter C. I. outlet pipe from old main to the new service reservoir was carried out. Expenditure Rs. 2,421.

7. The following drainage works were either in progress or completed :—

Karáchi.—The work of laying the gravitating sewers (on the Shone system) in connection with the drainage extension scheme in civil lines and Frere town quarters was completed. Expenditure Rs. 48,333.

Poona Drainage.—The following works were carried out :—

(1) Reconstruction of the Bahiroba Nalla crossing on the 14″ rising main.

(2) Reconstruction of Hadapsar Nalla crossing on the 15″ effluent main.

(3) Improvements to balancing tank.

(4) The laying of the new 1½″ water-supply connection to the low-level pumping station and an additional storage tank.

(5) Twenty-six extra house connections. Expenditure Rs. 20,800.

8. Sixty-eight schemes were under investigation by the Sanitary Engineer to Government, Bombay, of which 32 were investigated by the Executive Engineer, Southern Sanitary District, 29 by the Executive Engineer, Northern Sanitary District, and 7 by the Sub-Divisional Officer, Sind Sanitary Sub-Division.

Those submitted in the rough to or returned approved by the Chief Engineer were as under :—

(1) Thána Water Supply.
(2) Borsad Water Supply.
(3) Viramgám Water Supply.
(4) Hyderabad Water Supply.
(5) Hyderabad Drainage.
(6) Nipáni Water Supply.

9. Borings for artesian water supplies were in progress during the year at the following places and the depths reached are noted against each :—

Broach	1,608 feet.	
Dholera	565 „	
Ránebennur	225 „	
Udoo	330 „	Two borings.
	550 „	
Kaira	368 „	

No supplies of potable artesian water were met with. Trial borings were taken at Pandharpur in the river Bhima to ascertain the foundation level for a proposed submerged dam. Shallow borings were taken at Shikárpur in connection with the cone of depression experiments for the proposed water-supply scheme. A three inch bore was made in the vaccine depôt well at Belgaum. A depth of 100′ below the bottom of the well or 170′ from ground level was reached without any improvement in the supply.

10. The Sanitary Engineer to Government carried out his annual tour throughout the Presidency, including Sind, and gave advice to Local Bodies. Reductions continue to be made in the Sanitary Engineer's staff owing to the war, necessitating slower progress in the preparation of water-supply and drainage schemes.

H. O. B. SHOUBRIDGE, M.Inst.C.E.,
Secretary, Sanitary Board, Bombay Presidency.

APPENDIX II(*a*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31ST DECEMBER 1917.

I.—SUMMARY.

The following summary shows the inspection and disinfection work done in the Port of Bombay in connection with outgoing and incoming vessels as well as those lying in the harbour and docks during the year ending 31st December 1917 :—

One thousand four hundred and eighty-two vessels of all sorts with 554,110 crew and passengers were examined as against 1,253 vessels with 365,956 crew and passengers during the preceding year. Troops are included among passengers which accounts for the large numbers.

The clothing, bedding and other articles of 153,545 members of crews and passengers of outgoing and incoming vessels and of members of crews of vessels lying in the Port were disinfected. Of these, 101,518 were Asiatic and African members of crews, third class or deck European and Native passengers and pilgrims who left the Port of Bombay for ports out of India and 52,027 were members of crews and passengers who arrived by vessels on which cases of infectious diseases had occurred during the voyage or while in the Port. In addition to the abovementioned numbers, 3,488 baggage coolies and stevedores' men were disinfected, in order to enable certain vessels to work cargo for a few hours after medical inspection and disinfection of their crews and passengers.

Fifty-seven vessels on which cases of infectious diseases had occurred were disinfected and 2 vessels which carried pilgrims to Jeddah were thoroughly cleansed and freed from rats by means of sulphur dioxide gas generated in a Clayton apparatus. Besides the 2 outgoing pilgrim ships 2 incoming and 47 outgoing vessels were fumigated. In addition to this number 52 vessels (mostly transports) were fumigated by the British India Steam Navigation Company's apparatus. Two hundred and twenty-five persons among whom cases of small-pox had occurred were vaccinated. In addition to this number 1,198 outgoing pilgrims were vaccinated by a special vaccinating staff lent by the municipality under the direction of the Police Commissioner. Inoculation was offered to the members of crews of plague-infected vessels but none were willing to undergo it.

II.—OUTGOING VESSELS.

2. In accordance with Government Notifications, General Department, No. 5331, dated the 6th July 1915, and No. 1713, dated the 15th March 1917, the medical examination of all vessels, crews and passengers proceeding to ports out of India, and the disinfection of the clothing and bedding of all Asiatic and African members of crews, of all passengers travelling 3rd class who were not provided with berth accommodation, of fourth class and deck passengers and of all Asiatic and African servants who sailed on such vessels were carried out immediately before they left the Port of Bombay.

3. One thousand two hundred and fifty-six outward bound vessels (including one Asiatic sailing craft) with 136,577 crew and 298,842 passengers (including troops) or a total of 435,419 persons were inspected as against 1,057 vessels with 115,422 crew and 177,680 passengers or a total of 293,102 persons during the preceding year.

4. The bedding, boxes and suspected articles of clothing, etc., of 89,516 Asiatic and African members of crews and of 11,996 third class, fourth class and deck passengers and pilgrims who sailed on steamers bound for ports out of India were disinfected. In addition to this disinfection, the clothing, bedding and other effects of 6 members of crew who sailed in one Asiatic sailing craft for ports out of India were also disinfected.

5. A few vessels had cases of infectious diseases among their crews and passengers within 12 days or, in the case of plague and cholera, 7 days prior to their departure from this Port. The Bills of Health granted to these mentioned the diseases which had occurred on board as well as the measures which had been taken before their departure for the prevention of the spread of infection on board or its introduction at other ports.

III.—INCOMING VESSELS.

6. In accordance with the rules prescribed under Government Notifications, General Department, No. 5331, dated the 6th July 1915, and No. 1713, dated the 15th March 1917, medical inspection and disinfection of vessels which were actually infected or suspected to be infected were carried out. All pilgrim ships and all vessels which arrived from East African Ports were also inspected on arrival.

7. Two hundred incoming vessels of various kinds with crews aggregating 25,583 persons and 89,675 passengers (including troops) were inspected during the year. Of the 200 vessels, 54 were found to have had cases of infectious diseases on board at the time of arrival or during the voyage. Twenty-eight were Hospital Ships and Hired Transports from Aden and the Persian Gulf Ports with 5,207 crew and 14,913 troops, among whom 2 cases of plague, 28 cases of cholera, 8 cases of small-pox, 14 cases of measles, 5 cases of chicken-pox and 12 cases of typhus had occurred. These cases were

mostly confined to troops and were disposed of by the Military Authorities on landing in Bombay. Twenty-three were Hospital Ships and Hired Transports and ordinary vessels from East African Ports with 4,364 crew and 23,131 troops and passengers, among whom 1 case of small-pox, 6 cases of measles, 4 cases of chicken-pox and 509 cases of jigger had occurred. The jigger patients among civilians were removed to the Arthur Road and Jamsetji Jijibhoy Hospitals, while those among troops were disposed of by the Military Department. The clothing and bedding of the passengers were disinfected before they were allowed to proceed to their homes. The clothing and bedding of the crews were also disinfected. The remaining 3 vessels arrived from other ports with 755 crew and 219 passengers, among whom 6 cases of chicken-pox had occurred. The vessels and the clothing and bedding of the crews and passengers were disinfected.

8. A case of sleeping sickness was reported to have been discovered in a West African Negro in the 34th (The Welsh) General Hospital, Deoláli, on the 17th January 1918. As it was not known that the patient, who was a soldier, was suffering from sleeping sickness at the time of his transfer to India it was not possible to put Rule 34 of the Medical Inspection Rules notified under Government Notification No. 1713, dated 15th March 1917, into operation.

IV.—Infectious Diseases on Vessels arriving and departing and in the Harbour and Docks.

9. Tabular Statement No. 1 gives the number of cases of infectious diseases which occurred on vessels arriving, departing and in the harbour.

It will be seen that 596 cases occurred on vessels arriving as follows:—2 cases of plague, 28 cases of cholera, 9 cases of small-pox, 20 cases of measles, 15 cases of chicken-pox, 509 cases of jigger, 12 cases of typhus and 1 case of sleeping sickness.

At the inspections of crews and passengers of outgoing vessels, 3 cases of small-pox, 1 case of measles and 1 case of chicken-pox were detected. Three cases of small-pox and 1 case of measles were reported to have been landed at Aden from certain ships which arrived there from Bombay.

Seventeen cases of plague, 10 cases of cholera, 7 cases of small-pox, 5 cases of measles, 4 cases of chicken-pox and 1 case of typhus occurred on vessels including Asiatic sailing craft lying in the harbour and docks.

10. Tabular Statement No. 2 gives separately details of infectious diseases on vessels in the harbour and docks. The clothing and bedding of the crews of these vessels aggregating 3,433 persons were disinfected. All these vessels were disinfected. The vessels on which plague cases had occurred were also fumigated.

V.—Disinfection and Fumigation of Ships.

11. During the year under report 108 vessels of all sorts were disinfected and fumigated.

12. Of the 108 vessels referred to in the foregoing paragraph, the fumigation of 51 vessels including 2 outward pilgrim ships was carried out by means of the Clayton process under the direction of the Port Health Officer. In addition to these the British India Steam Navigation Company fumigated 52 steamers by their own apparatus. This number is not included in Tabular Statement No. 1.

13. The Port Disinfection-Station received every Monday clothing and bedding from various hospitals for disinfection. Four hundred and thirty bundles containing clothing and bedding of this kind were disinfected as against 423 during the previous year. Eight thousand nine hundred and eighty blankets, mattresses, pillows, pillow covers, sheets, towels, life-belts, etc., were disinfected during the year at the request of the Marine Store Officer. Three thousand four hundred and eighty-eight baggage coolies to work cargo on outward bound vessels after obtaining Bills of Health were disinfected at the request of their Commanders and Agents.

VI.—General Health of the Shipping.

14. During the year under report 1,640 persons connected with the shipping were admitted into the various hospitals in the City. St. George's Hospital admitted 729 European patients, of whom 16 died, 682 discharged cured and 31 remained under treatment after the 31st December 1917. The Jamsetji Jijibhoy Hospital admitted 193 Asiatic patients, of whom 14 died; the Gokuldas Tejpal Hospital 524 Asiatics, of whom 34 died; and the Arthur Road and the Maratha Hospitals 194 Indians including troops, of whom 17 died, 177 were discharged cured.

15. No deaths occurred in connection with the cleansing of bilges of ships during the year. There were 308 accidents on board of vessels which were lying in the harbour or docks. Of these 36 proved fatal.

VII.—Red Sea Pilgrim Traffic.

A.—Outward Pilgrim Traffic.

16. In accordance with the Government of India's Notification, Home Department (Sanitary), No. 1606, dated the 13th July 1908, and Government Resolution, General

Department, No. 4361, dated the 18th August 1909, and Goverment of India's Notification, Department of Education (Sanitary), No. 635, dated Simla, the 24th April 1912, reproduced in Bombay Government Notification, General Department, No. 2759, dated 30th April 1912, the Port of Bombay was open for the embarkation of Muhammadans going on pilgrimage to Mecca *viâ* Jeddah. Before the pilgrims embarked at Bombay the ships were thoroughly cleansed and freed from rats by means of the Clayton process. The pilgrims were medically inspected and their clothing, and bedding disinfected before they were allowed to embark.

17. The names of the ships, the numbers of pilgrims carried by them and the dates on which they left Bombay for Jeddah are given below :—

Name of Vessel.	No. of Pilgrims sailed.	Date of departure.
1. *S.S.* "Koweit"	1,109	... 13th August 1917.
2. *S.S.* "Bahrein"	230	... 24th do.
Total ...	1,339	

18. It will be seen that 1,339 pilgrims left during the season as against 2,632 in the previous year.

19. The classification of the pilgrims is as follows :—

14 Bombay City.	7 Bihar and Orissa.
7 Bombay Presidency (including Sind).	8 Native States.
8 Madras Presidency.	17 Chinese Territory.
448 Bengal Presidency.	32 Afghanistan.
18 Assam.	58 Persia.
14 United Provinces and Oudh.	91 Russian Territory.
21 Punjab and North-West Frontier.	1 Tibet.
8 Central Provinces.	146 Arabia.
	441 Java.
538	801

Total ... 1,339

20. One thousand one hundred and ninety-eight outgoing pilgrims were vaccinated before starting by a special staff placed under the Police Commissioner by the municipality. Besides these, some pilgrims from other Provinces and Native States had been vaccinated before leaving their homes for Bombay.

21. The Pilgrim Observation Camp at Perim was not opened during the year 1917 as per Government Orders, General Department, No. 6923, dated the 6th September 1915, and No. 8785, dated the 15th November 1915.

22. From the medical diaries of the doctors in medical charge of pilgrim ships it appears that there were no deaths on board these ships between Bombay and Jeddah.

23. During the season under report no doctor was appointed to the medical charge of a pilgrim ship unless he was in possession of either a degree, or at least the license of a recognized Indian University, or the qualification of a Military Assistant Surgeon and had his name and qualifications registered in the United Kingdom or in India in accordance with the Government of India Notification, Department of Education (Sanitary), No. 14, dated the 7th January 1915.

B.—Inward Pilgrim Traffic.

24. During the year under report, 2,809 pilgrims, including a number who left Bombay in the previous year's Haj, arrived from Jeddah in 6 vessels. The names of the ships and the number of pilgrims brought by each vessel are tabulated in Statement No. 3 which is appended to this report.

25. The total number of deaths which occurred at sea among the returning pilgrims was 11. The chief causes were old age, general debility, chronic diarrhœa, heart-failure and pneumonia.

26. None of the pilgrim ships had any cases of infectious diseases during the voyage or on arrival at Bombay.

VIII.—Sanitary State of the Harbour and Foreshore.

27. The sanitary state of the harbour and of the various bandars, basins and docks was satisfactory.

IX.—Cholera, Small-pox and Plague in the City of Bombay.

28. During the year under report 61 deaths from cholera, 269 deaths from small-pox and 1,706 deaths from plague occurred in the City of Bombay as against 141 from cholera, 1,021 from small-pox and 1,987 from plague during the preceding year.

X.—Establishment.

29. Lieut.-Colonel J. G. Hojel, C.I.E., I.M.S., acted as Port Health Officer from 1st January to 26th February and the undersigned was in charge from 27th February to the end of the year.

30. The members of the Medical, Clerical and Sanitary Police Staffs performed their duties satisfactorily.

31. The services of a Commissioned Medical Officer had to be engaged on a few occasions when work was heavy.

32. The shipping agents and commanders of vessels, as a rule, observed the regulations and carried out cheerfully the orders framed in connection with the Paris Sanitary Convention.

W. M. HOUSTON, M.B., D.P.H.,
Major, I. M. S.,
Health Officer of the Port.

Bombay Port Health Office :
Town Customs House, dated 1st April 1918.

TABLE No. 1.

The following tabular statement gives a summary of the shipping of the Bombay Port and the work in connection therewith for the year ending 31st December 1917 :—

Vessels including country craft.	Number of vessels inspected.	Number of persons including crew of vessels.	Number of Asiatic crew and 3rd class or deck passengers disinfected.	Number of vessels.		Number of persons vaccinated.	Diseases and number of cases of each.								
				Disinfected.	Fumigated.		Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Jigger.	Scarlet fever.	Typhus.	Sleeping sickness.
Entered	200	115,258	48,594	31	2	225	2	28	9	20	15	509	...	12	*1
Left	1,256	435,419	101,518	...	47	1,198	...	...	3	1	1	...	...	...	...
In harbour during the year ...	26	3,433	3,433	26	2	...	17	10	7	5	4	...	...	1	...
Total ...	1,482	554,110	153,545	57	51	1,423	19	38	19	26	20	509	...	13	1
Total for 1916 ...	1,253	365,956	95,281	65	51	2,925	18	23	31	37	28	339	5	...	

* This case was detected by the Military Authorities among troops.

TABLE No. 2.

The following table includes all steamers, square-rigged vessels and native sailing craft which become infected while lying in the Port of Bombay during the year 1917 :—

Months.	Number of persons who were attacked with infectious diseases at the Bundars and Docks.		Total number of infected vessels.	Total Number of infectious diseases in the Bombay Harbour.						Number of crew disinfected.
	Plague.	Cholera.		Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Typus.	
1917.										
January ...	...	...	1	1	...	...	...	...	...	177
February ...	...	...	1	1	...	...	...	...	...	10
March ...	...	...	3	...	1	1	...	1	...	500
April ...	...	...	4	...	...	1	...	3	1	922
May ...	11	...	2	12	...	1	...	...	...	136
June ...	...	...	1	...	...	...	5	...	...	99
July ...	...	...	2	1	1	...	...	...	...	442
August ...	...	...	2	2	1	...	...	...	...	76
September ...	...	...	...	...	...	...	...	...	...	...
October ...	...	...	5	...	5	...	...	...	...	25
November ...	...	...	1	...	1	...	...	...	...	218
December ...	...	...	4	...	1	4	...	...	...	828
Total ...	11	...	26	17	10	7	5	4	1	3,433
Total for 1916 ...	...	...	26	5	3	13	2	8	...	1,642

TABLE No. 3.

Statement showing the number of pilgrims who returned to Bombay from Mecca by vessels during the year 1917 :—

No.	Name of Ship.	Date of arrival.	Number of crew inspected.	Number of pilgrims inspected.	Number of deaths during voyage.	Number of cases of infectious diseases on board during voyage		Remarks.
						On arrival.	During voyage.	
		1917.						
1	*S.S.* "Hejaz" ...	5th January ...	96	920	6	...	...	
2	*S.S.* "Hejaz" ...	24th February ...	84	321	2	...	...	
3	*H.T.* "Purnea ...	3rd April ...	109	72	...	...	...	
4	*S.S.* "Koweit' ...	29th October ...	95	1,139	3	...	...	
5	*S.S.* "Bahrein ...	15th November ...	83	227	...	...	...	
6	*S.S.* "Koweit"' ...	17th December ...	84	130	...	...	...	
		Total ...	551	2,809	11	...	...	

APPENDIX II (*b*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF KARACHI FOR THE YEAR ENDING 31ST DECEMBER 1917.

I.—OUT-GOING VESSELS.

During the year under report 856 steam vessels outward bound for ports out of India were inspected and given Bills of Health by the Health Officer of the Port as against 534 during the preceding year.

Of this number 366 vessels were proceeding to Aden, the Red Sea and Europe, and 490 to other ports out of India including the Persian Gulf.

Bills of Health were also given after inspection to 1,463 country boats as against 1,032 during the preceding year.

The total number, therefore, of Bills of Health issued during the year under report was 2,319 as against a total of 1,566 issued during the preceding year—an increase of 48 per cent.

The Indian crews and deck passengers of all steamers and country craft proceeding to ports out of India were medically inspected, and their clothing and bedding disinfected by steam at the Port Disinfecting Station, Kiamari, immediately before their departure from the Port of Karachi, in accordance with the Outward Medical Inspection Rules for the Port of Karachi promulgated by the Local Government.

II.—IN-COMING VESSELS.

During the year under report 63 vessels which arrived in quarantine were inspected for the existence of infectious disease as against 43 vessels during the preceding year—an increase of 47 per cent.

Of these vessels, 10 arrived from East African ports and the remaining 53 hailed from various other ports.

Five country boats (four from East Africa and one from the Persian Gulf) also arrived in quarantine and were duly inspected on arrival as against six during the preceding year.

III.—SYNOPSIS OF INSPECTION AND DISINFECTION PERFORMED.

The following tabular statement shows the number of vessels, crews and passengers inspected during the year under report:—

	Vessels.			Crews and Passengers.		
	Steamers.	Country boats.	Total.	Steamers.	Country boats.	Total.
In-coming	63	5	68	9,917	157	10,074
Out-going	856	1,463	2,319	168,479	18,777	187,256
					Total ...	197,330

Of the 197,330 persons (crews and passengers), who were medically inspected on their arrival at, or departure from, the Port of Karachi, 72,883 persons (crews and passengers) also had their clothing, bedding and other article disinfected.

The corresponding figures for the preceding year being 149,334 and 66,650, respectively, the figures for the year under report show an increase of 32 and 9 per cent., respectively.

IV.—MISCELLANEOUS DISINFECTION.

On several occasions during the year the clothing and bedding of patients suffering from infectious disease, as well as the clothing and bedding of "contacts", were received for disinfection from the Epidemic Diseases Hospital, the Civil Hospital and other Institutions in Karachi, and also from private individuals, and were duly disinfected by saturated steam under pressure in the "Equifex" stoves of the Port Disinfecting Station, Kiamari.

The following articles which were received for disinfection from various Hospital Ships, Ambulance Transports and Ambulance Trains, during the year under report, were also duly disinfected, *viz.*, 4,786 pillows and pillow cases, 6,549 sheets, 2,518 towels and napkins, 1,033 dusters, 448 mattresses, 345 blankets, 1,396 trousers, 575 pyjamas, 681 drawers, 2,164 coats, 275 jackets, 331 shirts, 437 vests, 350 kurtas, 63 turbans and 10 razais.

V.—Plague.

During the year under report nineteen cases of plague occurred among the Indian crews of two incoming vessels,—*viz.*, sixteen cases on a Government vessel and three on a non-Government vessel and were removed for treatment to the plague ward of the Epidemic Diseases Hospital. In both instances the outbreak of plague among the Indian crews was preceded by mortality among rats on board; and the rats having been found on bacteriological examination in Karachi to be plague-infected, the following precautionary measures were promptly carried cut, *viz.*, the vessels were moved to the quarantine anchorage where their holds, 'tween decks, alleyways, store-rooms, forecastles, etc., were thoroughly cleansed and freed from rats and rat-fleas by means of the Clayton process extending over a week; the entire effects (clothing, bedding, etc.) of the crews were disinfected by saturated steam under pressure in the "Equifex" stoves of the Port Disinfecting Station, the Indian crews were isolated in a camp on shore, the European Commanders, Officers and Egineers were placed under medical observation in tents at the Disinfecting Station, and all the members (both European and Indian) of the crews were inoculated against plague by means of Haffkine's prophylactic vaccine. No further cases of plague occurred on board the vessels in question. Two dead rats, which on bacteriological examination proved to be plague-infected, having been found on board the hopper dredger "Edward Jackson" in the harbour, the vessel was duly claytonised, the crew's effects desinfected, and the crew and European Officers placed under surveillance, after which no further rat-mortality or plague or any other illness occurred.

VI.—Cholera.

No cases of this disease occurred during the year under report.

VII.—Small-pox.

Ten cases of small-pox were removed to the Epidemic Diseases Hospital from a country boat which arrived from the Persian Gulf. The necessary precautionary measures (*viz.*, disinfection of the Crew's kit and quarters, vaccination and surveillance of the crew, etc.) were duly carried out, and no further cases of small-pox were reported. During the year under report, 77 persons availed themselves of the prophylactic measure of vaccination which was offered to them in this port, and were duly vaccinated or re-vaccinated at the Vaccination Station, Kiamari, by the Superintendent of Vaccination.

VIII.—Chicken-pox.

During the year under report one hundred and twenty cases of chicken-pox were removed from six incoming vessels, *viz.*, one hundred and fifteen cases from a hired transport, a case each from four other Government vessels, and one case from a non-Government vessel. With regard to the first vessel, the patients and contacts, who numbered 781 men and were West Africans recruited for service in the I. W. T. Corps in Mesopotamia, were taken charge of and segregated on shore by the Military Medical Authorities and all their effects (clothing, bedding, etc.,) were thoroughly disinfected by saturated steam at the Port Disinfecting Station; the crew's effects were also disinfected and the vessel itself (holds, 'tween decks, hospital quarters, forecastles, etc.) was claytonised, after which no further cases of chicken-pox occurred on board.

With regard to the five other vessels, the usual precautionary measures were duly carried out, and no further cases were reported.

IX.—Measles.

One case of measles was removed from the I. G. T. S. "Patrick Stewart", and the usual precautionary measures carried out on board.

X.—Parotitis (Mumps).

Siv cases of mumps were removed for treatment to the Civil Hospital, Karachi, from two Government vessels, all the patients being Indian members of the crews. The quarters which had been occupied by the patients as well as the crew's effects (clothing, bedding, etc.) were thoroughly disinfected, and no further cases occurred.

XI.—Diphtheria.

No cases of this disease were met with during the year under report.

XII.—Yellow Fever.

No cases arrived at this port during the year.

XIII.—Jigger.

During the year nine convalescent cases of jigger, (*i.e.*, persons from whom the jiggeri-sacs had been enucleated before arrival at Karachi) were landed from the troops returning from the East Africa on board a hired transport. They were taken charge of by the Military Medical Authorities, and their effects (bedding, clothing, etc.), as well as the effects of the other troops and passengers on board, and also of the ship's crew, were disinfected by steam at the Disinfecting Station, after which the vessel was claytonised before sailing hence for a part out of India.

XIV.—Sleeping Sickness.

No cases of this disease were detected during the year.

XV.—Typhus Fever.

During the year one case of typhus fever was removed to the Civil Hospital from a Government vessel, and the necessary precautionary measures were duly carried out. No further cases of this disease were reported.

XVI.—Non-Infectious Diseases detected at the Outward and Inward Medical Inspection.

During the year under report forty cases of illness of all sorts (*e. g.*, malarial fever, pneumonia, dysentery, beri-beri, etc.) were detected in the course of the usual medical inspection of crews and passengers before embarkation, and were sent to the Civil Hospital, Karachi, for treatment.

XVII.—Deaths from Non-Infectious Diseases reported on Boardship.

During the year twenty-one deaths from various causes (*e. g.*, pneumonia, tuberculosis, malaria, heart-disease, accident, etc.) were reported as having occurred on board of vessels either in Karachi Harbour or during the voyage to Karachi.

XVIII.—Emigrants.

During the year under report two hundred and ninety-eight emigrants proceeding to Mombassa (East Africa) *via* Bombay were medically examined by the Health Officer of the Port in his capacity as Medical Inspector of Emigrants, and given certificates that they were in a fit state of health to undertake the voyage to East Africa as required in section 65 (1) of the Indian Emigration Act of 1908.

XIX.—Red Sea Pilgrimage.

Owing to the abnormal shipping and other conditions occasioned by the War, no pilgrim ships sailed from, or returned with pilgrims to, the Port of Karachi during the year under report.

XX.—Clayton Apparatus.

During the year under report fifty-one vessels were fumigated by means of the Clayton Apparatus before sailing for ports out of India as against eight vessels claytonised during the preceding year.

XXI.—Sanitary State of the Harbour.

The sanitary state of the harbour was fairly satisfactory.

XXII.—Port Health Establishment.

The following list shows the names of the Medical Staff who did duty under the Health Officer of the Port during the year:—

Names.	Period of service. Y.	m.	d.
Assistant Surgeon B. F. Khambatta, M. B., B. S.	1	0	0
Sub-Assistant Surgeon Baharsing Toursing Advani	1	0	0
Mrs. Lake, Lady Nurse	1	0	0

The abovementioned medical staff carried out the responsible duties which fell to their share tactfully and efficiently.

The Clerk, Mr. Mahomed Jaffer Sheikh Ibrahim performed his duties with zeal and to my entire satisfaction.

The office peons and the members of the Steam-Launch, Disinfecting Station and Clayton Apparatus establishments worked satisfactorily.

The Shipping Agents and Commanders, as a rule, observed the regulations and carried out cheerfully the orders framed in connection with the Paris International Sanitary Convention.

H. CAREY VENIS, L.R.C.P.,
L.R.C.S., D.P.H.,
Health Officer of the Port, Karachi.

Port Health Office,
Kiamari, dated 20th February 1918.

APPENDIX II (*c*).

ANNUAL REPORT OF THE HEALTH OFFICRR OF THE PORT OF ADEN, FOR THE YEAR 1917.

I.—General Remarks.

Shipping.

Seven hundred and seventy-seven steamers and rigged vessels were granted bills of health during the year.

Of the above number 495 were sailing under the British flag and 282 under Foreign flags.

Bills of health issued to vessels having had cases of infectious diseases on board were annotated according to the circumstances of each case.

All steam vessels and country crafts, which sailed from this port between the 10th April and 30th June 1917 were given a Necrological Certificate, because plague existed in a sporadic form all over the district, first breaking out in the Suburb of Hedjuff.

Altogether there were 122 indigenous plague cases with 91 deaths during that period. All cases were conveyed to Twin Island Quarantine Hospital and were treated there. All charges in connection with the treatment of the plague cases were debited to the Settlement Funds.

During the above period, necessary precautions were taken to check the spread of the disease, such as disinfection of houses, segregation of contacts, etc. All dead-bodies were examined for plague by the Medical men in Government service or private practitioners in the different divisions of the district.

The following ships were fumigated during the year under report, by means of Clayton apparatus :—

The Steam Ship "Falcon" owing to the occurrence of a plague case, and to dead rats, having been found on board.

The Steam Ship (Hired Transport) "Maryland" on account of its having cholera on board among the labour passengers from India for Overseas.

Seven hundred and thirty-five dhows were granted bills of health during the year.

The accompanying table A gives a list of vessels on board of which infectious diseases existed on arrival. In the case of these vessels all sanitary precautions were taken to prevent the spread of the disease.

The following cases of infectious diseases were landed from the shipping :—

Small-pox	3	Measles	1

II.—Pilgrim Traffic.

Three ships (including one hired transport) carrying pilgrims passed through the port during the year. All were medically examined or inspected ; but they were not granted pratique :—

Year.	No. of ships.	No. of pilgrims.	No. of deaths.
1917	3	1,815	1

III.—Table A.

List of vessels on board of which cases of infectious diseases existed on arrival at this port during the year :—

Date.	Name of ship.	Nationality.	From	To	Number of cases.	Remarks.
18th March 1917 ..	S. S. "Morea" ...	British ...	Bombay ...	London ...	1 S. P.	Landed.
" " " ...	" "Kaiser-i-Hind".	" ...	London ...	Bombay ...	3 C. P. 1 Gr. Mls.	On board.
30th " " ...	" "Yarra" ...	French ...	Marseilles ...	Mauritius ...	1 C. P.	"
24th April 1917 ...	" "Mooltan" ...	British ...	London ...	Bombay ...	2 C. P.	"
27th June 1917 ...	" "Khiva" ...	" ...	Bombay ...	London ...	1 Mls.	Landed.
10th November 1917...	" "Carpathian".	" ...	Suez ...	Abadan ...	*1 Mls.	"
3rd December 1917 ...	" "Mannitonka" H. T.	" ...	Bombay ...	Overseas ...	*2 S. P.	"

N.B.—S. P. stands for Small-pox, C. P. for Chicken-pox, Mls. for Measles and Gr. Mls. for German Measles.

* These cases were landed by the Military Department.

H. T. "Maryland arrived at this port from Bombay on the 19th June 1917 with Cholera on board among the labour passengers for Overseas. Cases of Cholera were landed and treated by the Military Department in Aden. There had been six deaths from Cholera on board the ship between Bombay and Aden.

IV.—The following are the names and other information regarding the pilgrim ships, which passed through Aden, during the year under report :—

No.	Date.	Names of vessels.	Nationality.	From	To	Number of		
						Pilgrims.	Infectious cases.	Deaths.
1	25th August 1917 ...	S. S. "Koweit" ...	British ...	Bombay ...	Jeddah ...	1,119	...	1
2	5th September 1917.	„ "Bahrein" ...	„ ...	„ ...	„ ...	262	...	...
3	4th November 1917.	„ H. T. do. ...	„ ...	Jeddah ...	Makalla and Bombay.	434	...	...

V.—Statement showing the number of cases treated at the Infectious Diseases Hospital, Maalla, during the year :—

Year.	Remaining as per last return.	Admission.	Deaths.	Protected.	Unprotected.
1917	1	64	1	62	2

Source of Admission.

Shipping.	Steamer-Point.	Maalla.	Crater.
5	.....	59	.....

N.B.—Of the above number, 3 cases of Small-pox, 1 case of Measles, 1 case of Mumps and 59 coolies kept under observation for Plague.

VI.—Statement showing the tubes received, their cost and the Vaccination operations performed during the year at the Port and the European General Hospital, Aden :—

Number of tubes Bombay Municipality Vaccine.	Cost.	Total number of Operations performed.	Primary.	Re-vaccination.
	Rs. a. p.			
526	131 8 0	317	300	17

RESULT.

Successful.		Unsuccessful.		Unknown.	
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
97	11	3	.....	*200	6

* These are the unprotected crew of the Dhows XX vaccinated on landing.

VII.—Establishment.

Dr. John C. Young, M. B., C. M., D. T. M., held the appointment of Acting Port Health Officer, Aden, from 1st January to 16th August 1917 and from 5th October to 31st December 1917. The intervening period he was on privilege leave. Major R. T. Wells, I. M. S., acted for him.

Office Establishment.

Mr. H. C. DePenning, clerk, from 1st January to 31st December 1917.

Peon Syed Ibrahim from 1st January to 26th November 1917 and from 27th November 1917 he has been on privilege leave. Ali Ahmed was appointed to act for him from 27th November 1917.

VIII.—Launch Establishment.

1. Driver Hussein Noman, from 1st January to 31st July 1917 and from 1st November to 31st December 1917. The intervening period the Driver was on privilege leave, and Stoker Abdu Noman was appointed to act for him.

2. Succani Mohamed Magon, from 1st January to 31st December 1917.

3. Stoker Abdu Noman, from 1st January to 31st July 1917 and from 1st November to 31st December 1917.

Ahmed Noman (an outsider) was appointed to act for him, during the period, the permanent stoker was acting in the capacity of Driver.

4. Ali Magon, Lascar, from 1st January to 31st December 1917.

IX.—Disinfecting Stove.

The services of the Fireman only were maintained for the care of the Disinfecting Stove.

Port Health Office, Aden,
dated 18th January 1918.

JOHN C. YOUNG,
Acting Port Health Officer, Aden.

APPENDIX III.

The following table shows when the drainage systems and water-works were completed in the towns mentioned therein, with the average annual death-rate for the five-year period preceding the introduction and also the ratio for the five-year period ending with the year under report, exclusive of recorded plague mortality :—

The rural death-rates for each district are added for comparison.

District.	Táluka.	Town.	Date of completion of works of		Average annual death-rate for the five-year period ending with 1917 exclusive of plague.	Average annual death-rate for the five-year period preceding the introduction of drainage or water-supply or both.	Death-rate in rural circles for the year 1917.	Plague mortality in rural circles for the year 1917.
			Drainage.	Water-supply.				
1	2	3	4	5	6	7	8	9
.....	.....	Bombay	*a* 1879	*b* 1892	28·80	27·08	.....	.....
West Khándesh	Dhulia	Dhulia	.....	1896	20·47	32·50	65·30	32·75
Ahmednagar	Ahmednagar	Ahmednagar	.....	1897	27·44	55·65	31·05	6·97
Surat	Chorási	Surat	.....	1898	27·23	39·77	38·55	7·12
Ahmedabad	Daskroi	Ahmedabad	*c* 1893	1891	44·56	45·21	54·96	22·45
Karáchi	Karáchi	Karáchi	*c* 1895	1894	37·17	35·15	7·51	·17
Sukkur	Sukkur	Sukkur	.....	1895	33·02	28·70	45·74	1·18
Thána	Sálsette	Bándra	.....	1896	21·77	23·01	28·90	1·85
Kolába	Panvel	Panvel	.....	1895	20·74	19·50	34·39	·80
Dhárwár	Hubli	Hubli	.....	1894	27·53	25·70	38·79	3·94
Ahmedabad	Viramgám	Viramgám	*d* 1893	.....	40·05	69·28	46·58	2·12
East Khándesh	Jalgaon	Jalgaon	.....	1909	23·75	31·56	50·54	17·18
Sholápur	Pandharpur	Pandharpur	.....	1911	41·81	40·98	42·22	11·12
Násik	Násik	Násik	.....	1913	30·54	52·73	47·33	13·79
Bijápur	Bijápur	Bijápur	.....	1913	20·35	30·08	43·91	5·71

a Drainage works commenced in 1879 are still in progress.

b Tánsa water-works completed in 1892. Besides these there are Vehár and Tulshi water-works.

c Drainage system partially introduced.

d In 1893 the gradient of the channel round the town was improved to carry away the sullage water that used to accumulate and stagnate round the town.

APPENDIX IV.

ANNUAL FORM No. I.—*Showing the Births registered in the Districts of the Bombay Presidency during the year 1917.*

1	2	3			4			5			6	7	8	9		
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1911.			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of Births over Deaths per 1,000 of Population.	Excess of Deaths over Births per 1,000 of Population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.				Male.	Female.	Total.
	Western Registration District.															
1	East Khándesh ..	521,546	512,668	1,034,214	26,407	25,008	51,415	25·53	24·18	49·71	105·59	..	·71	25·40	24·00	49·40
2	West Khándesh ..	293,300	287,380	580,680	15,146	14,465	29,611	26·08	24·91	50·99	100·47	·99	..	25·74	24·85	50·59
3	Násik	455,045	448,599	903,644	20,954	19,696	40,650	23·19	21·79	44·98	106·38	..	2·07	23·17	22·04	45·21
4	Thána	456,673	424,235	880,908	14,770	13,894	28,664	16·77	15·77	32·54	106·30	2·97	..	17·83	17·06	34·89
5	Kolába	295,085	298,972	594,057	11,690	10,922	22,612	19·68	18·38	38·06	107·03	6·20	..	20·33	19·33	39·66
6	City of Bombay ..	629,854	333,509	963,363	10,907	10,425	21,332	11·32	10·82	22·14	104·62	..	11·69	10·63	10·23	20·86
	Central Registration District.															
7	Ahmednagar	475,163	468,828	943,991	18,815	17,521	36,336	19·93	18·56	38·49	100·00	·29	..	20·75	19·61	40·36
8	Poona	538,238	526,568	1,064,806	18,096	16,668	34,764	16·09	15·65	32·64	108·57	..	8·37	17·29	16·15	33·44
9	Sholápur	391,311	376,706	768,017	15,278	14,342	29,620	19·89	18·67	38·56	106·52	..	15·00	21·67	20·58	42·25
10	Sátára	538,841	541,957	1,080,798	21,857	20,585	42,442	20·22	19·05	39·27	106·18	..	17·62	20·31	19·19	39·50
11	Ratnágiri	553,368	650,234	1,203,602	19,766	18,680	38,446	16·42	15·52	31·94	105·81	7·61	..	16·27	17·26	33·53
	Southern Registration District.															
12	Belgaum	478,458	463,490	941,948	20,214	19,585	39,799	21·46	20·79	42·25	103·21	..	8·99	20·96	20·23	41·19
13	Dhárwár	519,995	505,091	1,025,086	21,894	21,247	43,141	21·36	20·73	42·09	103·05	..	5·21	20·08	19·29	39·37
14	Bijápur	433,866	429,061	862,927	17,057	16,241	33,298	19·77	18·82	38·59	105·02	..	12·12	20·05	19·40	39·45
15	Kánara	220,965	210,369	430,434	7,473	7,314	14,787	17·36	16·99	34·35	102·17	1·46	..	17·35	16·51	33·86
	Gujarát Registration District.															
16	Surat	326,839	327,135	653,974	14,019	13,742	27,761	21·44	21·01	42·45	103·02	3·87	..	19·61	18·69	38·30
17	Broach	158,219	148,448	306,667	7,193	6,849	14,042	23·46	22·33	45·79	105·02	7·96	..	23·70	22·27	45·97
18	Kaira	370,174	321,468	691,642	15,723	13,878	29,601	22·73	20·07	42·80	113·29	6·71	..	22·68	20·64	43·32
19	Panch Mahals ..	165,902	156,751	322,653	7,256	6,712	13,968	22·49	20·80	43·29	108·10	19·10	..	22·54	21·48	44·02
20	Ahmedábad	432,124	395,213	827,337	17,779	16,219	33,998	21·49	19·60	41·09	109·62	..	12·84	21·13	19·10	40·23
	Sind Registration District.															
21	Karáchi	290,390	225,943	516,333	5,825	5,021	10,846	11·18	9·64	20·82	116·01	..	4·64	12·77	10·92	23·69
22	Hyderabad	337,526	273,584	611,110	5,122	3,726	8,848	8·38	6·10	14·48	137·47	..	11·12	10·00	7·41	17·41
23	Thar and Párkar ..	241,274	192,091	433,365	4,438	3,416	7,854	10.24	7·88	18·12	129·92	..	10·35	11·75	9·36	21·11
24	Nawabshah	247,719	200,759	448,478	5,640	4,139	9,779	12·57	9·23	21·80	136·26	..	9·74	11·37	8·06	19·43
25	Lárkána	359,207	301,621	660,828	7,799	6,315	14,114	11·80	9·55	21·35	123·50	..	11·09	13·96	11·14	25·10
26	Sukkur	312,732	260,803	573,535	8,293	6,624	14,917	14·46	11·55	26·01	125·20	..	19·87	13·82	11·10	24·92
27	Upper Sind Frontier.	145,541	117,445	262,986	4,049	3,129	7,178	15·40	11·90	27·30	129·40	..	14·45	12 75	9·96	22·72
	Total for the Presidency ..	10,188,455	9,398,928	19,587,383	363,460	336,363	699,823	18·56	17·17	35·73	108·05	..	5·03	18·72	17·37	36·09

ANNUAL FORM No. II.—*Showing the* BIRTHS *and* DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1917.*

1	2	3	4	5			6		7			8
Number.	Districts.	Area in square miles.	Average population per square mile.	Population (Census 1911).			Births.		Number of Deaths registered.			Number of Deaths of males to every 100 Deaths of females.
				Male.	Female.	Total.	Total Number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.	
	Western Registration District.											
1	East Khándesh	4,550	227	521,546	512,668	1,034,214	51,415	49·71	26,162	25,983	52,145	100·69
2	West Khándesh	5,439	106	293,300	287,380	580,680	29,611	50·99	14,496	14,536	29,032	99·72
3	Násik	5,879	154	455,045	448,599	903,644	40,650	44·98	21,726	20,799	42,525	104·46
4	Thána	3,576	246	456,673	424,235	880,908	28,664	32·54	13,611	12,438	26,049	109·43
5	Kolába	2,169	274	295,085	298,972	594,057	22,612	38·06	9,653	9,276	18,929	104·06
6	City of Bombay	22·5	41,483	629,854	333,509	963,363	21,332	22·14	18,144	14,447	32,591	125·59
	Central Registration District.											
7	Ahmednagar...	6,613	142	475,163	468,828	943,991	36,336	38·49	18,235	17,830	36,065	102·27
8	Poona	5,366	198	538,238	526,568	1,064,806	34,764	32·64	21,903	21,771	43,674	100·61
9	Sholápur	4,556	169	391,311	376,706	768,017	29,620	38·56	20,410	20,733	41,143	98·44
10	Sátára	4,818	224	538,841	541,957	1,080,798	42,442	39·27	31,356	32,599	63,955	96·00
11	Ratnágiri	3,989	302	553,368	650,234	1,203,602	38,446	31·94	14,489	14,792	29,281	97·93
	Southern Registration District.											
12	Belgaum	4,613	204	478,458	463,490	941,948	39,799	42·25	24,344	23,925	48,269	101·75
13	Dhárwár	4,604	223	519,995	505,091	1,025,086	43,141	42·09	24,401	24,076	48,477	101·35
14	Bijápur	5,707	151	433,866	429,061	862,927	33,298	38·59	22,059	21,699	43,758	101·66
15	Kánara	3,946	109	220,065	210,369	430,434	14,787	34·35	7,185	6,975	14,160	103·01
	Gujarát Registration District.											
16	Surat	1,651	396	326,839	327,135	653,974	27,761	42·45	12,884	12,346	25,230	104·36
17	Broach	1,468	209	158,219	148,448	306,667	14,042	45·79	5,682	5,921	11,603	95·96
18	Kaira	1,596	433	370,174	321,468	691,642	29,601	42·80	12,973	11,984	24,957	108·25
19	Panch Mahals	1,606	201	165,902	156,751	322,653	13,968	43·29	3,955	3,849	7,804	102·75
20	Ahmedabad	3,824	216	432,124	395,213	827,337	33,998	41·09	22,371	22,246	44,617	100·56
	Sind Registration District.											
21	Karáchi	11,782	44	290,390	225,943	516,333	10,846	20·82	7,335	5,909	13,244	124·13
22	Hyderabad	4,417	138	337,526	273,584	611,110	8,848	14·48	8,439	7,235	15,674	116·64
23	Thar and Párkar	13,638	32	241,274	192,091	433,365	7,854	18·12	6,655	5,686	12,341	117·04
24	Nawabshah	3,867	116	247,719	200,759	448,478	9,779	21·80	7,406	6,742	14,148	109·85
25	Lárkána	5,053	131	359,207	301,621	660,828	14,114	21·35	11,031	10,414	21,445	105·92
26	Sukkur	5,585	103	312,732	260,803	573,535	14,917	26·01	13,457	12,854	26,311	104·70
27	Upper Sind Frontier ...	2,644	99	145,541	117,445	262,986	7,178	27·30	5,587	5,392	10,979	103·62
	Total for the Presidency ...	122,978	159	10,188,455	9,398,928	19,587,383	699,823	35·73	405,949	392,457	798,406	103·44

1	2											10		
Number.	Districts.	Deaths per 1,000 of Population from										Mean Ratio of deaths per 1,000 during previous five years.		
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	All causes.				
										Male.	Female.	Total.	Male.	Female.	Total.
	Western Registration District.														
1	East Khándesh	·02	·22	17·23	14·45	1·37	5·11	·28	11·74	50·16	50·68	50·42	37·78	36·42	37·11
2	West Khándesh	·13	·23	20·17	13·15	·48	3·38	·34	12·12	49·42	50·58	50·00	36·80	35·88	36·34
3	Násik	·02	·02	14·12	13·57	1·38	5·31	·30	12·33	47·74	46·36	47·05	39·28	37·96	38·62
4	Thána	·03	·28	1·54	18·45	1·02	1·37	·55	6·33	29·82	29·21	29·57	26·19	26·25	26·22
5	Kolába	·24	·71	1·15	17·14	2·06	2·51	·40	7·65	32·71	31·02	31·86	28·88	27·04	27·96
6	City of Bombay	·06	·27	1·76	2·46	2·58	13·28	·62	12·79	28·81	43·32	33·83	27·30	41·10	32·08
	Central Registration District.														
7	Ahmednagar	·17	·12	7·11	10·80	3·24	5·97	·29	10·51	38·38	38·03	38·21	34·99	33·74	34·37
8	Poona	·07	·16	10·11	12·07	2·85	6·39	·33	9·04	40·69	41·35	41·02	34·14	33·07	33·61
9	Sholápur	·65	·03	18·19	15·59	3·61	3·26	·45	11·79	52·15	55·03	53·57	39·31	39·79	39·55
10	Sátára	·32	·05	29·50	13·90	3·19	2·69	·43	9·09	58·19	60·04	59·17	32·03	31·30	31·67
11	Ratnágiri	·13	·21	·28	10·18	·22	4·13	·44	7·73	26·18	22·74	24·32	23·80	20·28	21·90
	Southern Registration District.														
12	Belgaum	5·45	·02	12·57	7·35	4·77	4·06	·45	16·56	50·88	51·62	51·24	32·80	33·54	33·16
13	Dhárwár	4·69	·03	8·94	9·67	1·97	4·54	·36	17·09	46·92	47·66	47·29	32·09	32·59	32·34
14	Bijápur	5·23	·01	9·15	15·23	3·50	4·04	·45	13·10	50·84	50·57	50·71	32·72	32·92	32·82
15	Kánara	1·16	·01	·74	13·06	2·89	1·73	·46	12·85	32·65	33·15	32·90	30·33	29·87	30·10
	Gujarát Registration District.														
16	Surat	·03	·75	5·84	11·78	·95	10·29	·33	8·61	39·73	37·74	38·58	30·05	29·42	29·73
17	Broach	...	·40	2·31	14·89	1·22	8·75	·42	9·84	35·91	39·89	37·83	35·51	37·00	36·25
18	Kaira	·01	·23	4·76	10·58	1·42	9·64	·53	8·92	35·04	37·28	36·09	32·50	34·69	33·62
19	Panch Mahals	...	·07	2·16	13·24	·48	2·00	·46	5·73	23·84	24·55	24·19	22·01	22·75	22·37
20	Ahmedabad	·01	·25	15·00	18·29	1·45	9·85	·38	8·70	51·77	56·29	53·93	36·41	37·75	36·69
	Sind Registration District.														
21	Karáchi	·05	·03	2·36	13·56	·34	2·23	·38	6·70	25·26	26·15	25·65	21·78	22·90	22·27
22	Hyderabad	·02	...	2·08	19·85	·61	1·39	·27	1·42	25·00	26·45	25·64	17·93	17·02	17·70
23	Thar and Párkar	...	·02	·01	26·02	·18	1·01	·31	·92	27·58	29·60	28·48	18·48	19·01	18·71
24	Nawabshah	...	·04	·04	30·48	·07	·10	·31	·50	29·88	33·58	31·54	17·15	17·27	17·20
25	Lárkána	·13	·01	·01	30·99	·02	·04	·30	·95	34·05	30·71	32·45	20·39	21·44	20·87
26	Sukkur	·45	·09	·81	40·68	·23	·24	·24	3·12	43·03	49·32	45·87	19·99	21·40	20·63
27	Upper Sind Frontier ...	·24	...	·14	39·91	·25	·20	·28	·73	38·39	45·91	41·74	14·85	16·09	15·42
	Total for the Presidency...	·87	·16	8·31	15·28	1·85	4·63	·39	9·29	39·84	41·76	40·76	29·82	30·37	30·09

ANNUAL FORM No. III.—DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1917.*

1	2	3												4	5
No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total Deaths registered during the year.	No.
	Western Registration District.														
1	East Khándesh	4,749	6,576	4,737	2,954	2,317	1,851	2,667	4,285	4,979	5,891	5,671	5,468	52,145	1
2	West Khándesh	4,062	4,576	2,712	1,344	1,066	923	1,308	2,084	2,263	2,578	3,251	2,865	29,032	2
3	Násik	3,324	2,754	3,152	2,462	2,382	2,178	2,785	3,264	4,257	5,524	5,590	4,853	42,525	3
4	Thána	2,660	2,111	2,680	2,052	1,988	1,560	1,791	2,106	1,958	2,066	2,476	2,601	26,049	4
5	Kolába	1,709	1,478	1,922	1,492	1,309	1,294	1,528	1,712	1,703	1,346	1,461	1,975	18,929	5
6	City of Bombay	2,491	2,391	3,210	2,994	2,950	2,413	2,782	2,804	2,777	2,564	2,437	2,778	32,591	6
	Central Registration District.														
7	Ahmednagar	3,648	2,810	2,377	1,837	1,926	2,054	2,770	3,088	3,691	4,032	4,203	3,629	36,065	7
8	Poona	5,255	4,144	3,588	2,429	2,242	2,346	3,041	3,413	3,746	4,334	4,669	4,467	43,674	8
9	Sholápur	6,544	5,366	3,494	1,967	1,772	1,858	3,124	2,959	2,959	3,387	3,731	3,932	41,143	9
10	Sátára	4,912	4,966	4,188	3,264	2,783	2,602	3,786	5,408	7,603	8,941	8,483	7,019	63,955	10
11	Ratnágiri	2,860	2,467	3,105	2,427	2,226	1,988	2,275	2,535	2,235	2,186	2,305	2,672	29,281	11
	Southern Registration District.														
12	Belgaum	4,282	3,795	4,590	3,767	3,309	3,198	3,743	4,137	4,519	4,470	4,436	4,003	48,269	12
13	Dhárwár	4,507	4,362	3,879	3,283	3,108	3,123	4,369	4,627	4,294	4,037	4,193	4,695	48,477	13
14	Bijápur	3,743	3,016	3,596	4,102	2,972	2,522	2,947	2,993	3,594	4,302	5,196	4,775	43,758	14
15	Kánara	1,395	1,282	1,557	1,009	855	893	1,114	1,238	1,197	1,164	1,100	1,356	14,160	15
	Gujarát Registration District.														
16	Surat	2,078	2,060	2,712	1,912	1,709	1,450	1,512	1,861	1,955	2,144	2,765	3,073	25,230	16
17	Broach	758	694	956	895	770	721	637	643	723	1,157	1,903	1,746	11,603	17
18	Kaira	1,501	1,512	2,498	1,771	1,559	1,667	1,652	1,604	1,800	2,386	3,318	3,689	24,957	18
19	Panch Mahals	544	465	641	522	516	480	481	482	492	727	1,137	1,317	7,804	19
20	Ahmedabad...	2,332	2,370	3,569	2,573	2,027	1,853	1,931	2,516	3,566	5,332	7,780	8,768	44,617	20
	Sind Registration District.														
21	Karáchi	1,401	1,215	1,183	1,236	1,266	816	547	524	813	1,208	1,731	1,804	13,244	21
22	Hyderabad	1,517	1,231	1,511	1,317	790	624	505	515	785	1,782	2,702	2,395	15,674	22
23	Thar and Párkar	1,771	1,525	1,400	1,152	950	666	474	375	458	921	1,444	1,205	12,341	23
24	Nawabshah	1,353	954	1,026	712	655	469	383	429	772	2,029	3,563	1,803	14,148	24
25	Lárkána	1,680	1,187	1,205	1088	889	684	607	560	1,062	3,006	5,788	3,689	21,445	25
26	Sukkur	1,389	1,017	1,127	1,023	994	779	738	656	1,759	4,984	6,739	5,106	26,311	26
27	Upper Sind Frontier ...	649	523	398	271	341	335	248	221	535	2,987	2,727	1,644	10,979	27
	Total for the Presidency...	73,114	66,347	67,013	51,955	45,671	41,347	49,745	57,039	66,495	85,485	100,819	92,876	798,406	
	Ratio of deaths per 1,000 in each month	3·73	3·41	3·42	2·65	2·33	2·11	2·54	2·91	3·40	4·36	5·15	4·74	40·76	

ANNUAL FORM NO. IV.

ANNUAL FORM NO. IV.—DEATHS *registered according to* AGE IN THE

1	2	3		4		5		6	
No.	Districts.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.								
1	East Khándesh	5,412	5,008	3,829	4,114	1,568	1,769	1,534	1,962
2	West Khándesh	2,808	2,589	2,043	2,172	1,078	1,209	1,039	1,156
3	Násik	4,815	4,000	3,540	3,588	1,359	1,579	1,189	1,298
4	Thána	2,422	2,205	2,283	2,280	868	870	455	379
5	Kolába	2,085	1,703	1,870	1,850	555	521	223	234
6	City of Bombay	4,621	4,215	1,920	2,000	499	584	532	483
	Central Registration District.								
7	Ahmednagar	4,159	3,514	3,516	3,248	951	1,123	586	687
8	Poona	4,204	3,535	3,977	3,720	1,337	1,540	1,118	1,145
9	Sholápur	3,691	3,060	3,795	3,681	1,390	1,443	1,030	1,106
10	Sátára	4,087	3,478	4,813	4,946	3,195	3,412	2,518	2,826
11	Ratnágiri	2,166	1,944	2,047	2,102	649	724	345	359
	Southern Registration District.								
12	Belgaum	3,286	2,729	4,044	4,444	2,606	2,775	1,654	1,729
13	Dhárwár	3,952	3,286	4,072	4,232	2,010	2,196	1,412	1,547
14	Bijápur	3,039	2,535	3,880	4,068	2,055	2,108	1,072	1,176
15	Kánara	1,635	1,514	739	780	303	336	198	175
	Gujarát Registration District.								
16	Surat	2,948	2,642	1,980	2,015	824	877	662	679
17	Broach	1,686	1,696	1,204	1,264	263	307	147	162
18	Kaira	3,074	2,996	2,699	2,502	596	552	496	425
19	Panch Mahâls	972	859	813	806	295	303	149	134
20	Ahmedabad	4,268	4,059	3,751	3,610	1,268	1,431	1,058	1,245
	Sind Registration District.								
21	Karáchi	1,698	1,583	928	895	354	378	278	252
22	Hyderabad	1,626	1,487	1,238	1,136	444	430	278	271
23	Thar and Párkar	954	888	878	898	411	399	266	218
24	Nawabshah	1,749	1,686	1,361	1,372	489	386	294	203
25	Lárkána	2,987	2,887	1,922	1,897	653	536	462	379
26	Sukkur	4,043	3,900	2,530	2,583	686	644	341	393
27	Upper Sind Frontier ...	1,597	1,651	1,357	1,386	330	319	148	116
	Total for the Presidency ...	79,984	71,649	67,029	67,589	27,036	28,751	19,484	20,739
	Population according to Census of 1911	333,992	333,705	1,033,360	1,066,128	1,286,872	1,204,044	112,922	893,170
	Ratios per 1,000 living ...	239·48	214·71	64·86	63·40	21·01	23·88	17·25	23·22

DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1917.*

7		8		9		10		11		12		13
15 and under 20.		20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	No.
1,011	1,312	2,667	2,886	2,703	2,416	2,223	1,735	1,856	1,420	3,359	3,361	1
581	821	1,585	1,850	1,671	1,534	1,246	998	1,022	783	1,423	1,424	2
801	983	1,843	2,044	2,114	1,820	1,741	1,352	1,551	1,285	2,773	2,850	3
402	409	1,185	1,378	1,486	1,242	1,429	972	1,263	877	1,818	1,826	4
248	326	741	910	853	753	935	662	972	870	1,171	1,447	5
1,213	1,027	3,015	2,099	2,173	1,180	1,492	756	1,265	751	1,414	1,402	6
552	812	1,381	1,716	1,270	1,231	1,408	1,119	1,799	1,728	2,613	2,652	7
694	860	1,734	2,186	1,977	2,051	1,906	1,637	1,703	1,431	3,253	3,666	8
1,022	1,100	1,855	2,232	1,745	1,910	1,507	1,598	1,532	1,608	2,843	2,995	9
1,767	2,177	3,159	3,771	2,998	3,198	2,653	2,495	2,433	2,140	3,733	4,156	10
358	374	1,091	1,212	1,113	1,133	1,255	1,048	1,475	1,265	3,990	4,631	11
1,029	951	2,438	2,563	2,297	2,196	2,103	1,651	1,838	1,478	3,049	3,409	12
889	1,026	2,566	3,024	2,349	2,237	2,127	1,713	1,995	1,675	3,029	3,140	13
655	712	1,939	2,310	1,827	1,721	1,876	1,599	2,067	1,676	3,649	3,794	14
240	280	696	915	861	731	799	512	679	535	1,035	1,197	15
485	540	1,078	1,282	1,084	1,054	1,052	792	988	693	1,783	1,772	16
96	104	344	439	330	448	426	360	481	357	705	784	17
331	270	1,088	974	1,134	1,045	1,077	935	1,024	793	1,454	1,492	18
90	94	299	344	265	321	310	252	321	172	441	564	19
1,014	969	2,786	2,605	2,409	2,382	2,075	1,901	1,860	1,808	1,882	2,236	20
259	280	936	691	843	577	668	335	522	290	832	628	21
315	339	1,019	907	949	795	983	592	689	481	898	797	22
280	213	794	728	872	705	743	506	657	438	800	693	23
282	287	644	833	690	643	631	408	507	329	759	595	24
492	428	890	1,186	950	921	847	632	759	544	1,069	1,004	25
415	523	995	1,249	1,017	867	1,047	696	902	633	1,481	1,366	26
114	143	326	417	344	358	372	280	361	221	638	501	27
15,635	17,360	39,094	42,751	38,324	35,419	34,931	27,536	32,521	26,281	51,911	54,382	
852,854	752,848	1,903,139	1,801,211	1,562,195	1,370,275	1,064,455	949,249	611,654	564,582	436,814	476,708	
18·33	23·06	20·54	23·73	24·53	25·85	32·82	29·01	53·17	46·55	118·84	114·08	

ANNUAL FORM No. V.—DEATHS *registered according to* CLASSES

1	2	3						
		POPULATION ACCORDING TO CENSUS OF 1911.						
No.	Districts.	Mahomedans.	Hindus.	Jains.	Christians.	Pársis.	Other Classes.	Total.
	Western Registration District.							
1	East Khándesh	99,521	902,131	9,361	748	371	22,082	1,034,214
2	West Khándesh	31,323	474,200	3,796	586	233	70,542	580,680
3	Násik	47,705	843,705	7,902	1,867	840	1,625	903,644
4	Thána	41,979	786,925	2,985	43,341	5,105	573	880,908
5	Kolába	28,876	560,266	1,411	1,149	303	2,052	594,057
6	City of Bombay	179,346	664,042	20,460	41,273	50,931	7,311	963,363
	Central Registration District.							
7	Ahmednagar	47,959	855,676	15,284	23,622	222	1,228	943,991
8	Poona	48,936	991,738	11,731	8,280	2,695	1,476	1,064,806
9	Sholápur	55,377	703,215	7,643	1,412	334	36	768,017
10	Sátára	36,688	1,028,176	14,883	815	209	27	1,080,798
11	Ratnágiri	85,303	1,110,594	1,913	5,678	46	68	1,203,602
	Southern Registration District.							
12	Belgaum	77,075	817,797	41,533	5,313	159	71	941,948
13	Dhárwár	136,943	872,885	10,413	4,526	218	101	1,025,086
14	Bijápur	101,069	757,542	3,235	1,052	28	1	862,927
15	Kánara	28,731	383,624	1,251	16,729	14	85	430,434
	Gujarát Registration District.							
16	Surat	55,394	571,834	9,821	1,050	11,783	4,092	653,974
17	Broach	67,752	192,964	3,053	1,052	2,770	39,076	306,667
18	Kaira	63,280	598,165	6,609	23,490	81	17	691,642
19	Panch Mahals	22,273	274,339	1,542	1,810	204	22,485	322,653
20	Ahmedabad	92,018	693,209	35,899	3,584	1,639	988	827,337
	Sind Registration District.							
21	Karáchi	396,334	111,748	650	3,625	2,202	1,774	516,333
22	Hyderabad	1,035,437	442,801	695	248	102	13,670	611,110
23	Thar and Párkar ...							433,365
24	Nawabshah							448,478
25	Lárkána	557,517	101,687	1	21	6	1,596	660,828
26	Sukkur	414,671	155,156	3	207	96	3,402	573,535
27	Upper Sind Frontier	235,970	26,495	...	10	5	506	262,986
	Total for the Presidency ...	3,987,477	14,920,914	212,074	191,438	80,596	194,884	19,587,383

N.B.—This and all the other statements refer to Natives only and not to Europeans. "Hindus"

in the Districts of the BOMBAY PRESIDENCY *during the year 1917.*

4							5						
NUMBER OF DEATHS REGISTERED.							RATIO OF DEATHS PER 1,000 OF POPULATION.						
Mahomedans.	Hindus.	Jains.	Christians.	Pársis.	Other Classes.	Total.	Mahomedans.	Hindus.	Jains.	Christians.	Pársis.	Other Classes.	Total.
4,602	47,490	11	31	2	9	52,145	46·24	52·64	1·18	41·44	5·39	·41	50·42
1,362	27,659	4	6	1	...	29,032	43·48	58·33	1·05	10·23	4·29	...	50·00
3,278	39,193	28	21	2	3	42,525	68·71	46·45	3·54	11·24	2·38	1·84	47·05
1,243	23,567	14	1,149	59	17	26,049	29·61	29·95	4·68	26·52	11·56	29·60	29·57
912	17,918	1	33	5	60	18,929	31·58	31·98	·71	28·72	16·50	29·24	31·86
6,682	21,957	1,419	1,301	1,008	224	32,591	37·26	33·06	69·35	31·52	19·79	30·64	33·83
1,927	33,970	57	101	...	10	36,065	40·18	39·71	3·73	4·27	...	8·14	38·20
2,144	41,283	38	171	24	14	43,674	43·79	41·63	3·25	20·78	8·91	9·49	41·02
2,428	38,592	115	6	1	1	41,143	43·86	54·88	15·06	4·25	2·99	27·78	53·58
1,944	61,557	444	7	1	2	63,955	52·99	59·87	29·83	8·59	4·78	74·07	59·17
1,994	27,182	23	75	...	7	29,281	23·36	24·48	11·72	12·50	...	101·44	24·33
3,814	42,562	1,683	206	...	4	48,269	50·80	52·04	40·52	38·77	...	56·34	51·24
6,111	41,820	418	126	2	...	48,477	44·62	47·91	40·14	27·84	9·17	...	47·29
4,960	38,659	89	50	...	...	43,758	49·08	51·03	27·51	47·53	...	...	50·71
909	12,768	51	431	1	...	14,160	31·64	33·28	40·77	25·79	71·43	...	32·90
1,929	20,641	244	31	221	2,164	25,230	34·82	36·10	24·84	29·52	18·76	528·84	38·58
2,671	7,476	59	12	48	1,337	11,603	39·42	38·74	19·33	11·41	17·33	34·22	37·83
2,154	22,483	137	171	1	11	24,957	34·03	37·58	20·72	7·27	12·35	647·05	36·09
643	5,208	39	11	3	1,900	7,804	28·87	18·98	25·29	6·08	14·71	84·50	24·19
4,848	38,490	1,158	89	23	9	44,617	52·69	55·52	32·26	24·83	14·03	9·12	53·93
7,993	5,100	...	81	35	35	13,244	20·17	45·64	...	22·34	15·89	16·35	25·65
9,716	5,947	...	1	...	10	15,674	25·35	35·75	12·95	12·10	...	5·19	25·64
6,457	5,835	5	1	...	43	12,341							28·48
10,079	4,046	4	1	...	18	14,148							31·54
16,366	5,069	3	...	...	7	21,445	29·36	49·85	3,000·00	...	...	4·39	32·45
16,116	10,159	...	1	1	34	26,311	38·86	65·47	...	4·83	10·42	9·99	45·87
9,500	1,469	...	...	2	8	10,979	40·26	55·44	...	...	4·00	15·81	41·74
132,782	648,100	6,044	4,113	1,440	5,927	798,406	33·30	43·44	28·50	21·48	17·86	30·41	40·76

include Hindus of all castes. "Other Classes" include Buddhists, Sikhs, Jews and all others.

ANNUAL FORM No. VI.—DEATHS *registered from* DIFFERENT CAUSES *in the*

1	2	3	4	5	6	7	8	9	10		
									Inju		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	A.—DISTRICTS.										
	Western Registration District.										
1	East Khándesh ...	903,053	19	209	14,460	13,743	1,301	4,625	9	11	173
2	West Khándesh ...	538,084	77	111	10,925	7,403	257	1,816	7	4	113
3	Násik	813,511	13	13	10,128	11,623	1,042	4,150	6	8	156
4	Thána	791,861	21	196	848	15,502	716	1,074	24	14	230
5	Kolába	567,043	142	400	411	9,983	1,203	1,424	7	3	163
	Central Registration District.										
6	Ahmednagar ...	888,096	157	59	5,220	9,966	2,936	5,195	4	11	188
7	Poona	859,267	47	48	8,964	11,185	2,258	4,480	6	4	219
8	Sholápur	660,338	314	14	11,684	10,426	2,218	1,937	5	3	200
9	Sátára	1,025,700	349	32	30,714	14,640	3,310	2,658	10	8	310
10	Ratnágiri	1,136,710	123	233	204	11,708	1,394	4,712	6	5	266
	Southern Registration District.										
11	Belgaum	869,243	4,930	19	11,173	6,644	4,304	3,483	25	9	299
12	Dhárwár	885,871	4,249	23	8,103	9,353	1,534	3,729	13	21	240
13	Bijápur	792,582	4,266	4	6,703	12,797	2,878	3,115	30	17	265
14	Kánara	382,278	440	5	317	5,274	1,036	625	10	2	156
	Gujarát Registration District.										
15	Surat	512,580	22	197	1,462	6,748	416	5,299	8	11	134
16	Broach	242,979	...	124	660	4,183	322	1,913	3	3	69
17	Kaira	594,309	4	67	2,694	6,154	822	5,590	11	9	174
18	Panch Maháls ...	291,248	...	9	334	3,847	140	614	2	8	74
19	Ahmedabad ...	568,530	4	121	5,350	12,869	637	3,499	7	13	153
	Sind Registration District.										
20	Karáchi	351,401	6	...	18	5,165	13	56	2	...	43
21	Hyderabad... ...	523,747	15	...	468	10,086	83	170	...	2	67
22	Thar and Párkar ...	424,563	...	7	...	11,007	69	344	2	3	35
23	Nawábsháh ...	436,579	...	19	12	13,293	30	34	4	1	64
24	Lárkána	628,336	84	7	1	18,898	8	19	3	1	132
25	Sukkur	468,207	43	15	92	18,255	50	35	8	5	71
26	Upper Sind Frontier.	251,646	46	...	3	10,178	62	41	3	9	43
	Total of Districts ...	16,407,762	15,371	1,932	130,951	270,930	29,039	60,637	215	185	4,037
	B.—TOWNS.										
	East Khándesh District.										
1	Jalgaon	17,195	...	...	563	151	25	113	...	...	6
2	Bhusáwal	18,312	...	...	563	173	11	87	...	...	19
3	Chopda	17,008	1	12	700	211	3	58	...	...	2
4	Dharangaon ...	15,607	...	...	458	80	16	75	...	...	6
5	Párola	14,177	...	...	96	124	16	61	...	...	1
6	Amalner	13,232	...	...	393	129	2	75	...	...	3
7	Erandol	13,144	...	3	119	94	20	74	...	...	6

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1917.*

			11	12	13										14
RIES.					RATIO OF DEATHS PER 1,000 OF POPULATION.										
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all Causes. For the year.	From all Causes. Mean of previous five years.	No.
23	18	234	10,765	45,356	·02	·23	16·01	15·22	1·44	5·12	·26	11·92	50·22	38·67	1
40	9	173	6,720	27,432	·14	·21	20·30	13·76	·47	3·38	·32	12·49	51·07	36·92	2
39	22	231	10,042	37,242	·01	·01	12·45	14·29	1·28	5·10	·28	12·34	45·78	38·64	3
168	10	446	4,583	23,386	·03	·25	1·07	19·58	·90	1·35	·56	5·79	29·53	25·74	4
50	1	224	4,346	18,133	·26	·70	·72	17·61	2·13	2·52	·40	7·63	31·97	28·17	5
46	7	256	9,325	33,114	·18	·07	5·58	11·22	3·31	5·85	·29	10·50	37·30	34·69	6
45	21	295	7,657	31,934	·05	·06	10·43	13·02	2·63	5·21	·34	8·91	40·65	31·93	7
50	6	264	7,004	33,861	·48	·02	17·69	15·79	3·36	2·92	·40	10·62	51·28	35·45	8
90	19	437	9,349	61,489	·34	·03	29·94	14·27	3·23	2·59	·43	9·11	59·94	31·54	9
234	...	511	8,765	27,650	·11	·20	·18	10·29	1·23	4·15	·45	7·71	24·32	21·92	10
45	13	391	14,757	45,701	5·67	·02	12·85	7·64	4·95	4·01	·45	16·98	52·58	33·46	11
28	7	309	15,082	42,385	4·80	·03	9·15	10·57	1·73	4·21	·35	17·02	47·85	31·90	12
40	11	363	10,134	40,260	5·38	·01	8·46	16·15	3·63	3·93	·46	12·79	50·80	32·76	13
11	1	180	5,046	12,923	1·15	·01	·83	13·80	2·71	1·63	·47	13·20	33·81	30·96	14
34	5	192	3,830	18,166	·04	·38	2·85	13·17	·81	10·34	·38	7·47	35·44	30·35	15
17	3	95	2,300	9,597	...	·51	2·72	17·22	1·32	7·87	·39	9·47	39·50	36·81	16
45	46	285	5,137	20,753	·01	·11	4·53	10·36	1·38	9·41	·48	8·64	34·92	32·53	17
36	17	137	1,649	6,730	...	·03	1·15	13·21	·48	2·11	·47	5·66	23·11	21·95	18
42	16	231	3,209	25,920	·01	·21	9·41	22·64	1·12	6·15	·41	5·64	45·59	32·37	19
22	1	68	271	5,597	·02	...	·05	14·70	·04	·16	·19	·77	15·93	14·40	20
65	...	134	2,6	11,252	·03	...	·89	19·25	·16	·32	·26	·57	21·48	15·27	21
90	1	131	392	11,950	...	·02	...	25·93	·16	·81	·31	·92	28·15	18·10	22
66	1	136	213	13,737	...	·04	·02	30·45	·07	·08	·31	·49	31·47	17·13	23
48	..	184	215	19,416	·13	·01	·00	30·08	·01	·03	·29	·34	30·90	20·41	24
24	1	109	160	18,759	·09	·03	·19	39·00	·11	·07	·23	·34	40·07	17·46	25
15	1	71	80	10,481	·18	...	·01	40·44	·25	·16	·28	·32	41·64	14·92	26
1,413	237	6,087	141,327	655,274	·94	·12	7·98	16·51	1·77	3·70	·37	8·61	40·00	29·06	
...	...	6	226	1,084	...	...	32·74	8·78	1·46	6·57	·35	13·14	63·04	31·35	1
...	1	20	236	1,090	...	...	30·74	9·45	·60	4·75	1·09	12·89	59·52	32·98	2
....	...	2	117	1,104	·06	·71	41·15	12·41	·18	3·41	·12	6·87	64·91	23·28	3
...	...	6	168	803	...	...	29·35	5·13	1·02	4·81	·38	10·76	51·45	26·14	4
...	...	1	140	438	...	...	6·77	8·75	1·13	4·30	·07	9·88	30·90	29·85	5
...	...	3	89	691	...	...	29·70	9·75	·15	5·67	·22	6·73	52·22	29·55	6
2	...	8	196	514	...	·23	9·05	7·15	1·52	5·63	·61	14·91	39·10	31·11	7

1	2	3	4	5	6	7	8	9	10		
									Injur		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	B.—TOWNS—*continued.*										
	East Khándesh—District—continued.										
8	Nasirabad	13,033	1	...	350	101	26	77	1	...	6
9	Chálisgaon	9,453	...	...	115	134	2	42	...	...	4
	West Khándesh District.										
10	Dhulia	30,757	...	20	475	157	5	105	...	...	10
11	Nandurbár... ...	11,839	...	4	312	74	17	43	...	...	7
	Násik District.										
12	Násik	33,163	...	2	765	123	122	317	1	...	8
13	Yeola	16,275	...	...	141	188	37	166	...	...	3
14	Málegaon	19,542	1	...	1,501	204	20	67	...	...	4
15	Igatpuri	8,380	...	...	12	41	7	26	...	...	4
16	Manmád	6,947	...	...	88	50	20	35	...	...	11
17	Trimbak	4,078	...	...	100	23	2	31	...	...	3
18	Deoláli Cantonment.	1,748	...	...	31	11	1	9	...	...	...
	Thána District.										
19	Thána	15,591	...	4	69	136	52	31	3	1	4
20	Bándra	22,885	...	24	78	50	49	28	2	1	6
21	Kurla	15,081	1	6	65	224	26	14	...	...	4
22	Bhiwandi	13,292	...	9	71	130	32	20	1	...	1
23	Kalyán	12,600	1	11	93	131	10	35	1	...	6
24	Bassein	9,598	...	...	130	79	16	12	...	...	3
	Kolába District.										
25	Alibág	3,358	...	1	1	31	3	17	...	...	4
26	Panvel	7,744	...	...	130	43	9	14	...	...	3
27	Mahád	7,164	...	12	114	67	2	21	...	...	5
28	Uran	8,748	...	10	30	64	11	18	...	1	3
29	City of Bombay ...	963,363	57	262	1,698	2,369	2,486	12,794	39	23	523
	Ahmednagar District.										
30	Ahmednagar ...	33,878	...	58	990	89	86	320	...	...	9
31	Sangamner... ...	14,269	...	...	491	96	14	36	...	...	2
32	Ahmednagar Cantonment.	7,748	...	...	10	41	25	86	1	...	1
	Poona District.										
33	Poona	126,201	29	115	985	1,268	615	1,904	...	4	35
34	Bárámati	10,190	...	...	166	50	57	45	...	1	3
35	Khed	8,056	...	...	139	48	10	44	...	...	3

No. VI—*continued.*

DEATHS.			11	12	13										14
					RATIO OF DEATHS PER 1,000 OF POPULATION.								From all Causes.		
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	For the year.	Mean of previous five years.	No.
1	1	9	162	726	·08	...	26·85	7·75	1·99	5·91	·69	12·43	55·70	39·06	8
...	...	4	42	339	...	...	12·17	14·18	·21	4·44	·42	4·44	35·86	29·30	9
...	...	10	191	963	...	·65	15·45	5·10	·16	3·42	·32	6·21	31·31	26·49	10
5	...	12	125	587	...	·34	26·35	6·25	1·44	3·63	1·01	10·56	49·58	35·81	11
...	3	12	491	1,832	...	·06	23·07	3·71	3·68	9·56	·36	14·80	55·24	39·14	12
...	2	5	244	781	...	...	8·66	11·55	2·27	10·20	·30	14·99	47·98	38·53	13
1	...	5	157	1,955	·05	...	76·81	10·44	1·02	3·43	·26	8·03	100·04	53·27	14
...	1	5	55	146	...	...	1·43	4·88	·84	3·10	·60	6·57	17·42	29·24	15
...	...	11	49	253	...	...	12·67	7·20	2·88	5·04	1·58	7·05	36·42	33·25	16
1	...	4	42	202	...	...	24·52	5·64	·49	7·60	·98	10·30	49·53	30·24	17
...	...	...	62	114	...	...	17·73	6·29	·57	5·15	...	35·47	65·21	38·90	18
...	...	8	242	542	...	·25	4·43	8·72	3·34	1·99	·51	15·52	34·76	31·04	19
...	1	10	337	576	...	1·05	3·41	2·18	2·14	1·22	·44	14·72	25·16	26·22	20
...	1	5	49	390	·07	·40	4·31	14·85	1·72	·93	·33	3·25	25·86	23·93	21
...	...	2	175	439	...	·68	5·34	9·78	2·41	1·50	·15	13·16	33·02	33·12	22
1	...	8	31	320	·08	·87	7·38	10·40	·79	2·78	·63	2·46	25·40	25·24	23
...	...	3	156	396	...	...	13·54	8·23	1·67	1·25	·31	16·25	41·26	27·92	24
...	...	4	56	113	...	·30	·30	9·23	·89	5·06	1·19	16·68	33·65	39·01	25
...	...	3	31	230	...	...	16·78	5·56	1·16	1·81	·39	4·00	29·70	29·18	26
...	...	5	58	279	...	1·68	15·91	9·35	·28	2·93	·70	8·09	38·94	24·01	27
...	...	4	37	174	...	1·18	3·42	7·31	1·25	2·06	·45	4·22	19·89	14·97	28
3	11	599	12,326	32,591	·06	·27	1·76	2·46	2·58	13·28	·62	12·79	33·83	32·08	29
2	...	11	458	2,012	...	1·71	29·22	2·63	2·54	9·45	·32	13·52	59·39	35·36	30
...	1	3	59	699	...	...	34·41	6·73	·98	2·52	·21	4·13	48·98	19·34	31
...	...	2	76	240	...	...	1·29	5·29	3·23	11·10	·26	9·81	30·98	20·13	32
1	2	42	1,446	6,404	·23	·91	7·80	10·05	4·87	15·09	·33	11·46	50·74	48·70	33
...	...	4	110	432	...	...	16·29	4·91	5·59	4·42	·39	10·79	42·39	30·52	34
...	...	3	88	332	...	...	17·26	5·96	1·24	5·46	·37	10·92	41·21	23·96	35

1	2	3	4	5	6	7	8	9	10		
									Inju		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	B.—TOWNS—*continued.*										
	Poona District—continued.										
36	Lonávla	12,295	1	1	131	76	14	65	...	...	3
37	Junnar	8,820	...	...	241	29	4	15	...	...	...
38	Poona Cantonment .	30,958	1	2	63	178	38	161	...	...	2
39	Kirkee do. ...	9,019	...	...	77	14	34	95	...	...	2
	Sholápur District.										
40	Sholápur	61,032	178	2	1,828	737	303	393	1	3	42
41	Bársi	18,097	...	...	144	419	68	81	3	...	10
42	Pandharpur ...	28,550	...	6	319	393	181	91	...	...	15
	Sátára District.										
43	Sátára	18,665	1	25	122	174	55	128	2	...	7
44	Wái	7,280	...	...	164	74	10	32	...	...	1
45	Karád	11,228	...	...	412	44	19	10	...	...	3
46	Ashta	9,351	...	...	191	85	29	11	...	1	2
47	Islámpur	8,574	...	...	278	11	19	66	...	...	7
	Ratnágiri District.										
48	Ratnágiri	15,822	1	6	125	47	29	60	...	...	...
49	Vengurla	17,294	2	18	9	181	22	56	1	1	4
50	Málvan	22,080	27	1	...	228	25	58	...	1	11
51	Chiplun	11,696	...	...	...	94	4	73	...	...	3
	Belgaum District.										
52	Belgaum	31,451	69	1	310	102	49	150	2	...	15
53	Gokák	7,326	102	1	41	19	22	44	...	...	3
54	Athni	13,849	5	...	228	90	51	71	3	...	4
55	Nipáni	10,779	19	...	79	64	38	58	...	...	4
56	Belgaum Cantonment.	9,300	12	...	12	3	28	20	...	...	2
	Dhárwár District.										
57	Dhárwár	29,370	212	1	46	100	98	171	1	1	18
58	Hubli	61,440	233	1	206	208	128	479	3	2	16
59	Gadag-Bettigeri ...	30,429	116	...	260	190	219	171	1	1	6
60	Ránebennur ...	10,931	...	1	497	31	25	70	...	...	2
61	Navalgund ...	7,045	1	...	49	26	12	39	...	...	5
	Bijápur District.										
62	Bijápur	27,569	28	...	210	88	49	160	...	..	15
63	Bágalkot	17,294	57	...	616	115	55	79	1	...	9
64	Guledgudd ...	15,249	125	1	329	82	24	56	...	...	2
65	Ilkal	10,233	37	1	38	62	14	74	...	...	...

No. VI—*continued.*

RIES.			11	12	13										14
					Ratio of Deaths per 1,000 of Population.								From all Causes.		
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	For the year.	Mean of previous five years.	No.
...	...	3	88	379	·08	·08	10·65	6·18	1·13	5·29	·25	7·16	30·82	33·83	36
...	1	1	39	329	...	...	27·33	3·29	·45	1·70	·11	4·42	37·30	20·98	37
...	...	2	106	551	·03	·06	2·03	5·75	1·23	5·21	·06	3·42	17·79	25·45	38
...	...	2	91	313	...	...	8·53	1·55	3·77	10·54	·22	10·09	34·70	35·37	39
3	...	49	1,422	4,912	2·92	·03	29·95	12·08	4·96	6·44	·80	23·30	80·48	74·68	40
3	...	16	238	966	...	...	7·96	23·15	3·76	4·47	·88	13·15	53·37	56·52	41
1	...	16	398	1,404	...	·21	11·17	13·77	6·34	3·19	·56	13·94	49·18	48·60	42
1	...	10	265	780	·05	1·33	6·53	9·32	2·99	6·85	·53	14·19	41·79	37·24	43
...	...	1	30	311	...	...	22·53	10·16	1·37	4·40	·14	4·12	42·72	41·89	44
1	...	4	97	586	...	...	36·69	3·92	1·69	·89	·36	8·64	52·19	27·61	45
1	...	4	42	362	...	...	20·42	9·09	3·10	1·17	·43	4·50	38·71	31·23	46
1	...	8	45	427	...	...	32·42	1·28	2·22	7·70	·93	5·25	49·80	31·61	47
...	...	...	121	389	·06	·38	7·90	2·97	1·83	3·79	...	7·65	24·58	21·86	48
...	...	6	206	500	·11	1·04	·52	10·47	1·27	3·24	·35	11·91	28·91	25·32	49
...	...	12	171	532	1·22	·05	...	10·33	1·13	3·08	·54	7·74	24·09	20·86	50
...	...	3	36	210	...	...	...	8·04	·34	6·24	·26	3·08	17·96	19·32	51
1	...	18	438	1,137	2·19	·03	9·86	3·24	1·56	4·77	·57	13·93	36·15	26·48	52
...	...	3	136	368	13·92	·14	5·60	2·59	3·00	6·01	·41	18·56	50·23	48·18	53
...	...	7	106	558	·36	...	16·46	6·49	3·68	5·13	·51	7·65	40·29	32·42	54
...	...	4	56	318	1·76	...	7·33	5·94	3·53	5·38	·37	5·20	29·50	30·71	55
...	...	2	110	187	1·29	...	1·29	·32	3·01	2·15	·22	11·83	20·11	20·00	56
...	2	22	554	1,204	7·22	·03	1·57	3·40	3·34	5·82	·75	18·86	40·99	35·34	57
1	1	23	833	2,111	3·79	·02	3·35	3·39	2·08	7·80	·37	13·56	34·36	34·73	58
...	1	9	629	1,594	3·81	...	8·54	6·24	7·20	5·62	·29	20·67	52·38	34·97	59
...	...	2	340	966	...	·09	45·47	2·84	2·29	6·40	·18	31·10	88·57	47·63	60
1	...	6	84	217	·14	...	6·96	3·69	1·70	5·54	·85	11·92	30·80	23·99	61
1	...	16	317	868	1·01	...	7·62	3·19	1·78	5·80	·58	11·50	31·48	30·47	62
...	...	10	321	1,253	3·30	...	35·62	6·65	3·18	4·56	·58	18·56	72·45	42·90	63
...	...	2	164	783	8·20	·07	21·58	5·37	1·57	3·67	·13	10·75	51·35	25·77	64
...	...	...	368	594	3·62	·10	3·71	6·06	1·37	7·23	...	35·96	58·05	44·56	65

1	2	3	4	5	6	7	8	9	10		
											Inju
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	B.—TOWNS—*continued.*										
	Kánara District.										
66	Kárwár	18,045	58	...	...	103	28	39	...	...	5
67	Kumta	10,343	...	...	...	92	50	30	...	...	6
68	Gokarn ...	5,304	...	...	...	33	73	16	1	...	2
69	Honáwar ...	7,323	...	...	...	54	42	10	...	...	2
70	Bhatkal	7,141	...	...	...	65	14	23	...	...	3
	Surat District.										
71	Surat	114,733	...	293	2,141	784	165	1,208	...	...	14
72	Bulsár	15,972	...	2	9	80	27	124	1	1	5
73	Ránder	10,689	...	...	206	94	12	95	1	...	1
	Broach District.										
74	Broach	43,353	...	...	47	44	31	632	2	1	14
75	Jambusar	8,991	...	...	...	140	15	97	...	...	3
76	Ankleshwar ...	11,344	...	...	2	199	5	42	...	...	3
	Kaira District.										
77	Kaira	7,297	...	...	109	72	6	129	1	...	10
78	Mehmadabad ...	6,330	...	1	200	80	8	27	...	...	3
79	Nadiád	27,145	...	85	94	405	32	258	...	...	27
80	Borsad	11,860	...	...	4	156	50	141	...	...	4
81	A'nand *	10,139	...	...	16	139	10	94	...	...	10
82	Umreth	13,651	...	3	78	132	13	160	...	...	7
83	Dákore	7,785	...	...	15	108	21	85	...	...	...
84	Kapadvanj	13,126	...	2	84	73	20	184	...	...	8
	Panch Mahálś District.										
85	Godhra	22,102	...	14	14	171	3	28	...	...	3
86	Dohad	9,303	...	...	350	255	10	4	...	...	5
	Ahmedabad District.										
87	Ahmedabad ...	214,000	...	14	6,236	1,139	503	4,300	...	...	53
88	Dhandhuka ...	8,040	...	19	416	195	11	68	...	...	3
89	Viramgám	20,769	...	...	204	584	20	202	...	...	4
90	Dholka	13,693	1	53	184	300	31	70	...	...	5
91	Ahmedabad Cantonment.	2,305	...	...	25	42	1	10	...	...	...
	Karáchi District.										
92	Karáchi	140,511	17	17	1,153	1,302	140	1,051	...	...	121
93	Tatta	11,161	...	...	2	208	1	14	...	...	1
94	Kotri	7,256	...	...	40	279	10	28	...	...	2
95	Karáchi Cantonment.	6,004	...	...	4	46	14	...	...	...	2

No. VI—*continued.*

			11	12	13										14
BIES.					RATIO OF DEATHS PER 1,000 OF POPULATION.										
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all Causes.		No.
													For the year.	Mean of previous five years.	
...	...	6	142	376	3·21	...	...	5·71	1·55	2·16	·33	7·87	20·84	18·45	66
1	...	6	109	287	...	...	...	8·89	4·83	2·90	·58	10·54	27·75	25·72	67
...	...	3	93	218	...	...	...	6·22	13·76	3·02	·57	17·53	41·10	37·71	68
...	...	2	64	172	...	...	...	7·37	5·74	1·37	·27	8·74	23·49	22·40	69
...	...	3	79	184	...	...	...	9·10	1·96	3·22	·42	11·06	25·77	22·13	70
1	...	15	1,572	6,178	...	2·55	18·66	6·83	1·44	10·53	·13	13·70	53·84	27·39	71
...	...	7	95	314	...	·13	·56	5·01	1·69	7·76	·44	5·95	21·54	25·08	72
...	·2	4	131	542	...	...	19·27	8·79	1·12	8·89	·37	12·26	50·70	33·16	73
...	7	24	604	1,382	...	...	1·08	1.02	·72	14·57	·55	13·93	31·87	34·19	74
2	...	5	32	289	...	...	...	15·57	1·67	10·79	·55	3·56	32·14	36·61	75
1	...	4	83	335	...	...	·18	17·54	·44	3·70	·55	7·32	29·53	29·11	76
1	...	12	60	388	...	...	14·94	9·87	·82	17·68	1·64	8·22	53·17	40·01	77
...	...	3	68	387	...	·16	31·60	12·64	1·26	4·27	·47	10·74	61·14	34·48	78
1	1	29	279	1,182	...	3·13	3·46	14·92	1·18	9·50	1·07	10·28	43·54	45·63	79
3	...	7	97	455	...	...	·33	13·15	4·22	11·89	·59	8·18	38·36	38·94	80
...	...	10	53	322	...	...	1·58	13·71	·98	9·27	·99	5·23	31·76	32·47	81
1	1	9	210	605	...	·22	5·71	9·67	·95	11·72	·66	15·38	44·31	36·44	82
...	1	1	80	310	...	...	1·93	13·87	2·70	10·92	·13	10·27	39·82	39·24	83
...	2	10	182	555	...	·15	6·40	5·56	1·52	14·02	·76	13·87	42·28	38·26	84
1	1	5	144	379	...	·63	·63	7·74	·14	1·27	·23	6·51	17·15	17·94	85
...	...	5	71	695	...	...	37·62	27·41	1·08	·43	·54	7·63	74·71	45·90	86
...	15	68	5,453	15,713	...	·07	29·14	5·32	2·35	20·09	·32	16·14	73·43	48·74	87
1	...	4	95	808	...	2·36	51·74	24·25	1·37	8·46	·50	11·82	100·50	35·19	88
1	...	5	274	1,289	...	...	9·82	28·12	·96	9·73	·24	13·19	62·06	39·15	89
...	....	5	153	797	·07	3·87	13·44	21·91	2·26	5·12	·36	11·17	58·20	47·39	90
...	...	...	12	90	...	...	10·85	18·22	·43	4·34	...	5·21	39·05	15·59	91
1	...	122	2,985	6,787	·12	·12	8.21	9·27	·99	7·48	·87	21·24	48·30	41·18	92
...	...	1	117	343	...	...	·18	18·64	·09	1·25	·09	10·48	30·73	26·34	93
...	...	2	9	368	...	...	5·51	38·45	1·38	3·86	·28	1·24	50·72	31·84	94
...	...	2	83	149	...	...	·67	7·66	2·33	...	·33	13·82	24·81	18·24	95

1	2	3	4	5	6	7	8	9	10		
									Inju		
No.	Districts and Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.		Wounding or Accident.
									Male.	Female.	
	B.—TOWNS—*concluded.*										
	Hyderabad District.										
96	Hyderabad ...	69,140	...	...	784	1,589	287	671	1	...	24
97	Halla	5,853	...	...	...	164	...	...	...	...	...
98	Matiari	6,487	...	...	...	205	4	11	...	...	3
99	Hyderabad Cantonment.	5,883	...	...	18	87	...	...	...	...	...
	Thar and Párkar District.										
100	Umarkot	3,946	...	...	...	130	1	30	1	1	...
101	Mirpurkhás ...	4,856	...	...	3	141	8	65	....	...	3
	Nawábsháh District.										
102	Nawábsháh ...	1,886	...	...	...	61	...	...	...	...	2
103	Tándo Adam ...	10,013	...	...	7	317	...	13	...	...	...
	Lárkána District.										
104	Lárkána	16,046	3	...	3	737	5	6	...	...	4
105	Kambar	6,286	...	...	...	360	...	...	...	...	5
106	Ratodero	5,411	...	1	...	357	3	1	...	...	4
107	Sehwán	4,749	...	...	...	125	...	2	...	...	1
	Sukkur District.										
108	Sukkur	34,916	37	9	161	1,568	37	62	...	...	14
109	Shikárpur	53,944	155	28	184	2,466	10	18	2	...	5
110	Rohri	9,919	8	...	30	609	37	23	...	...	3
111	Garhi Yásin ...	6,549	18	1	...	433	...	...	...	...	4
	Upper Sind Frontier District.										
112	Jacobabad	11,340	17	...	33	318	3	12	...	...	2
	Total of Towns ...	3,179,621	1,632	1,163	31,923	27,989	7,282	30,030	77	44	1,331
	Total for the Presidency ...	19,587,383	17,003	3,095	162,874	298,919	36,321	90,667	292	229	5,368

N.B.—Districts A in this statement do not include the population or deaths of

No. VI—*concluded.*

RIES.			11	12	13										14
					Ratio of Deaths per 1,000 of Population.								From all Causes.		
Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total Deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	For the year.	Mean of previous five years.	No.
1	...	26	490	3,847	...	...	11·34	22·98	4·15	9·70	·38	7·09	55·64	34·50	96
...	...	...	...	164	...	...	...	28·02	...	...	...	...	28·02	16·66	97
3	...	6	42	268	...	...	...	31·60	·62	1·70	·92	6·47	41·31	24·46	98
...	...	...	38	143	...	...	2·06	14·79	...	...	...	6·46	24·31	17·04	99
...	...	2	5	168	...	...	...	32·94	·25	7·59	·51	1·27	42·56	50·69	100
...	...	3	3	223	...	...	·62	29·03	1·65	13·39	·62	·62	45·02	57·97	101
...	...	2	2	65	...	...	...	32·34	...	...	1·06	1·06	34·47	19·49	102
1	...	1	8	346	...	...	·70	31·65	...	1·30	·10	·80	34·55	25·99	103
...	...	4	296	1,054	·19	...	·19	45·93	·31	·37	·25	18·45	65·69	35·39	104
...	...	5	13	378	...	...	...	57·28	...	...	·79	2·07	60·13	29·79	105
...	...	4	5	371	...	·18	...	65·98	·55	·18	·74	·92	68·56	31·60	106
...	...	1	98	226	...	...	...	26·32	...	·42	·21	20·64	47·59	30·43	107
...	...	14	292	2,180	1·06	·26	4·61	44·91	1·06	1·78	·40	8·36	62·44	28·12	108
...	...	7	1,249	4,117	2·87	·52	3·41	45·71	·19	·33	·13	23·14	76·30	40·70	109
...	...	3	86	796	·81	...	3·02	61·40	3·73	2·32	·30	8·67	80·25	39·09	110
...	...	4	3	459	2·76	·15	...	66·12	...	...	·61	·45	70·09	32·71	111
...	...	2	113	498	1·50	...	2·91	28·04	·26	1·06	·18	9·96	43·92	26·54	112
52	59	1,563	40,550	142,132	·51	·37	10·04	8·89	2·29	9·44	·49	12·75	44·70	35·55	
1,465	296	7,650	181,877	798,406	·87	·16	8·31	15·26	1·85	4·63	·39	9·29	40·76	30·09	

Towns B. In all the other statements "Districts" include Towns.

ANNUAL FORM No. VII.—DEATHS *registered from* CHOLERA *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1917.*

1	2	3		4		5												6			7			8	
No.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of Deaths per 1,000 of Population.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from cholera were reported.	Number in each District.	Number from which deaths from cholera were reported.													Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	22	4	1,438	6	...	...	...	...	...	1	7	13	...	1	...	...	10	11	21	·02	·02	·02	2·11	1
2	West Khándesh ...	10	3	1,096	8	68	5	...	...	...	...	1	3	...	...	...	...	45	32	77	·15	·11	·13	2·15	2
3	Násik	19	4	1,649	5	...	...	...	1	5	...	1	...	7	...	...	...	8	6	14	·02	·02	·02	1·81	3
4	Thána	17	4	1,643	5	...	...	...	1	...	...	2	2	...	...	12	6	14	9	23	·03	·02	·03	·70	4
5	Kolába	14	7	1,461	21	47	3	...	...	...	...	...	...	...	10	18	64	71	71	142	·24	·24	·24	·93	5
6	City of Bombay ...	1	1	1	1	6	...	1	...	1	1	7	1	5	20	6	9	42	15	57	·07	·04	·06	·47	6
	Central Registration District.																								
7	Ahmednagar	15	8	1,348	26	6	4	13	7	...	...	...	3	28	57	15	24	83	74	157	·17	·16	·17	2·83	7
8	Poona	18	7	1,201	12	...	2	13	1	...	2	3	1	1	12	8	35	41	37	78	·08	·07	·07	2·29	8
9	Sholápur	10	8	718	42	85	133	31	8	35	9	45	32	24	18	24	53	283	209	492	·72	·55	·65	1·94	9
10	Sátára	19	10	1,346	43	4	13	15	47	31	40	22	14	41	76	44	3	191	159	350	·35	·29	·32	2·21	10
11	Ratnágiri	15	11	1,311	30	15	35	12	...	7	1	1	1	...	...	29	52	64	89	153	·11	·13	·13	·13	11
	Southern Registration District.																								
12	Belgaum	15	15	1,070	361	402	498	1,011	757	624	730	395	194	313	164	45	4	2,770	2,367	5,137	5·79	5·11	5·45	1·47	12
13	Dhárwár	18	17	1,295	338	38	725	484	488	497	525	772	629	305	192	81	75	2,403	2,318	4,811	4·79	4·59	4·69	·74	13
14	Bijápur...	13	13	1,122	384	166	143	761	1,548	792	351	212	167	202	112	37	22	2,370	2,143	4,513	5·46	4·99	5·23	·76	14
15	Kánara...	16	8	1,265	55	...	87	101	19	10	37	12	71	14	54	45	48	251	247	498	1·14	1·17	1·16	·24	15
	Gujarát Registration District.																								
16	Surat	12	3	760	4	9	5	...	...	...	...	...	2	...	...	...	6	9	13	22	·03	·04	·03	·25	16
17	Broach...	9	...	409	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·20	17
18	Kaira	15	1	586	1	...	...	...	...	...	...	...	3	1	...	...	...	2	2	4	·01	·01	·01	·40	18
19	Panch Mahals ...	7	...	660	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·32	19
20	Ahmedabad	13	2	880	3	1	...	4	...	...	...	...	...	...	...	...	...	3	2	5	·01	·01	·01	·29	20
	Sind Registration District.																								
21	Karáchi	16	2	665	2	6	...	...	...	...	...	...	...	14	3	...	...	18	5	23	·06	·02	·05	·90	21
22	Hyderabad ...	11	1	864	5	15	...	...	...	...	...	...	...	...	...	...	...	12	3	15	·03	·01	·02	·93	22
23	Thar and Párkar ...	13	...	901	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·15	23
24	Nawábsháh	9	...	721	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·41	24
25	Lárkána	15	6	737	10	...	...	...	...	...	...	...	...	8	49	29	1	43	44	87	·12	·14	·13	·27	25
26	Sukkur...	12	8	684	11	...	...	...	...	...	...	...	13	218	30	...	...	159	102	261	·51	·39	·45	·19	26
27	Upper Sind Frontier.	6	3	422	3	...	...	...	...	...	...	...	...	17	24	22	...	30	33	63	·21	·28	·24	·14	27
	Total for the Presidency.	360	146	26,253	1,376	868	1653	2,446	2,877	2,002	1,697	1,480	1,148	1,198	817	415	402	9,012	7,991	17,003	·88	·85	·87	1·10	

ANNUAL FORM No. VIII.—DEATHS *registered from* SMALL-POX *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1917.*

1	2	3		4		5												6			7		8			9	10
No.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Number of these Deaths among Children.		Total Ratio of Deaths per 1,000 of Population.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.													Male.	Female.	Total.	Under 1 year.	Under 10 years.	Male.	Female.	Total.		
	Western Registration District.																										
1	East Khándesh ...	22	13	1,438	55	...	1	19	31	20	37	23	16	9	5	16	47	100	124	224	96	121	·19	·24	·22	·65	1
2	West Khándesh ...	10	10	1,096	34	...	...	1	4	1	16	22	19	6	10	13	43	66	69	135	48	87	·22	·24	·23	·76	2
3	Násik	19	5	1,649	8	1	...	...	2	...	1	3	2	2	...	1	3	7	8	15	7	8	·02	·02	·02	·43	3
4	Thána	17	15	1,643	103	16	8	35	48	45	35	23	20	4	4	3	9	131	119	250	70	168	·29	·28	·28	·22	4
5	Kolába	14	13	1,461	152	24	21	45	58	79	64	57	23	12	10	6	19	221	202	423	114	252	·75	·67	·71	·31	5
6	City of Bombay ...	1	1	1	1	9	13	49	57	37	41	22	9	10	5	2	8	145	117	262	70	54	·23	·35	·27	·58	6
	Central Registration District.																										
7	Ahmednagar	15	7	1,348	20	6	1	3	4	9	8	18	15	14	12	10	17	55	62	117	30	70	·12	·13	·12	·16	7
8	Poona	18	11	1,201	26	3	21	10	14	26	22	24	11	5	8	7	15	77	89	166	63	85	·14	·17	·16	·33	8
9	Sholápur	10	5	718	7	1	7	7	2	...	...	...	...	...	2	...	3	9	13	22	3	12	·02	·03	·03	·25	9
10	Sátára	19	10	1,346	16	1	...	1	4	15	11	13	1	6	4	...	1	25	32	57	10	23	·05	·06	·05	·11	10
11	Ratnágiri	15	14	1,311	96	21	25	28	43	31	37	18	21	7	9	12	6	134	124	258	67	87	·24	·19	·21	·25	11
	Southern Registration District.																										
12	Belgaum	15	6	1,070	12	2	1	3	...	4	1	1	3	...	4	2	...	10	11	21	3	9	·02	·02	·02	·18	12
13	Dhárwár...	18	6	1,295	10	...	...	2	1	7	5	7	...	4	...	...	...	15	11	26	9	11	·03	·02	·03	·25	13
14	Bijápur	13	5	1,122	6	2	2	...	...	...	...	...	...	...	...	...	...	3	3	6	1	2	·01	·01	·01	·21	14
15	Kánara	16	2	1,265	2	...	...	...	3	2	...	...	...	...	...	...	...	1	4	5	1	1	·00	·02	·01	·30	15
	Gujarát Registration District.																										
16	Surat	12	10	760	94	9	62	197	110	83	18	8	2	3	...	...	...	250	242	492	49	320	·77	·74	·75	·15	16
17	Broach	9	6	409	46	6	21	27	38	15	15	1	...	...	...	...	1	61	63	124	33	53	·39	·42	·40	·05	17
18	Kaira	15	11	586	35	4	30	56	37	15	10	2	4	...	...	...	...	77	81	158	63	68	·21	·25	·23	·03	18
19	Panch Mahals	7	4	660	9	1	2	...	...	6	6	2	1	...	...	2	3	11	12	23	5	12	·07	·08	·07	·04	19
20	Ahmedabad	13	10	880	60	62	44	33	22	27	11	5	2	...	1	...	...	102	105	207	72	85	·24	·27	·25	·07	20
	Sind Registration District.																										
21	Karáchi	16	1	665	1	...	...	1	2	3	2	2	1	...	...	5	1	8	9	17	3	7	·03	·04	·03	·25	21
22	Hyderabad	11	...	864	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·22	22
23	Thar and Párkar ...	13	2	901	2	...	...	2	...	...	...	...	...	...	...	5	2	5	7	...	...	2	·01	·03	·02	·24	23
24	Nawábsháh	9	2	721	3	...	...	...	...	...	...	5	10	3	...	1	...	8	11	19	...	...	·03	·05	·04	·09	24
25	Lárkána	15	4	737	4	...	...	...	1	1	2	...	...	3	1	...	...	2	6	8	1	2	·01	·02	·01	·05	25
26	Sukkur	12	8	684	6	4	...	7	5	19	12	3	2	1	...	...	...	27	26	53	7	4	·09	·10	·09	·07	26
27	Upper Sind Frontier ...	6	...	422	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·08	27
	Total for the Presidency.	360	181	26,253	809	172	259	526	487	442	354	260	167	89	75	80	181	1,547	1,548	3,095	825	1,543	·15	·16	·16	·26	

ANNUAL FORM No. IX.—DEATHS *registered from* FEVER *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1917.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from fever were reported.	Number in each District.	Number from which deaths from fever were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	22	22	1,438	1,347	1,076	1,029	1,147	1,023	934	735	1,036	1,390	1,477	1,775	1,811	1,507	7,376	7,564	14,940	14·14	14·75	14·45	14·21	1
2	West Khándesh ...	10	19	1,096	1,073	769	644	615	523	460	377	478	659	640	743	975	851	3,646	3,988	7,634	12·43	13·84	13·15	12·20	2
3	Násik	19	19	1,649	1,523	1,076	850	1,070	1,063	942	793	921	1,003	1,066	1,193	1,149	1,132	6,180	6,083	12,263	13·58	13·56	13·57	14·03	3
4	Thána	17	17	1,643	1,539	1,888	1,357	1,659	1,177	1,080	898	918	1,246	1,229	1,329	1,689	1,782	8,340	7,912	16,252	18·26	18·65	18·45	16·27	4
5	Kolába	14	14	1,461	1,363	964	858	1,056	848	671	635	771	857	850	706	840	1,132	5,159	5,029	10,188	17·48	16·81	17·14	15·03	5
6	City of Bombay — *Central Registration District.*	1	1	1	1	161	137	215	230	241	205	229	199	178	173	195	203	1,475	894	2,369	2·34	2·68	2·46	2·79	6
7	Ahmednagar ...	15	15	1,348	1,230	735	604	728	626	747	736	990	1,004	1,081	1,065	1,096	780	5,260	4,932	10,192	11·07	10·52	10·80	11·12	7
8	Poona	18	18	1,201	1,107	984	875	1,187	887	811	898	1,105	1,122	1,139	1,157	1,282	1,301	6,622	6,226	12,848	12·30	11·82	12·07	13·24	8
9	Sholápur	10	10	718	699	959	708	798	612	566	607	1,122	1,189	1,090	1,303	1,515	1,406	5,926	6,049	11,975	15·1	16·06	15·59	15·23	9
10	Sátára	19	19	1,346	1,250	1,153	928	1,210	1,104	1,168	1,021	1,147	1,327	1,384	1,643	1,435	1,473	7,411	7,617	15,028	13·75	14·05	13·90	11·78	10
11	Ratnágiri	15	15	1,311	1,242	1,302	1,179	1,562	1,199	963	836	1,073	855	711	777	801	1,001	5,696	6,562	12,258	10·29	10·91	10·18	11·31	11
	Southern Registration District.																								
12	Belgaum	15	15	1,070	992	615	463	675	606	550	492	539	600	571	556	643	622	3,563	3,354	6,922	7·46	7·24	7·35	5·77	12
13	Dhárwár	18	18	1,295	1,183	832	710	814	838	704	658	793	756	749	802	941	1,261	4,971	4,937	9,908	9·56	9·77	9·67	7·58	13
14	Bijápur	13	13	1,122	677	1,111	772	900	1,051	944	851	1,064	906	1,055	1,159	1,664	1,667	6,670	6,474	13,144	15·37	15·09	15·23	10·05	14
15	Kánara	16	16	1,265	993	684	502	623	451	359	354	423	437	447	468	415	558	2,804	2,817	5,621	12·74	13·39	13·06	12·49	15
	Gujarát Registration District.																								
16	Surat	12	12	760	736	697	649	778	650	652	530	500	476	437	496	931	910	3,852	3,854	7,706	11·79	11·78	11·78	14·46	16
17	Broach	9	9	409	381	307	317	466	374	283	283	267	242	278	498	697	549	2,197	2,369	4,566	13·89	15·96	14·89	20·66	17
18	Kaira	15	15	586	565	508	506	945	591	506	566	529	434	496	713	851	674	3,738	3,581	7,319	10·10	11·14	10·58	12·35	18
19	Panch Mahális ...	7	7	660	582	353	3·3	416	350	348	284	274	229	263	422	587	442	2,159	2,114	4,273	13·01	13·49	13·24	16·56	19
20	Ahmedabad ...	13	13	880	816	1,022	1,129	1,856	1,313	974	812	741	809	1,048	1,530	2,109	1,786	7,528	7,601	15,129	17·42	19·23	18·29	23·60	20
	Sind Registration District.																								
21	Karáchi	16	16	665	665	953	761	590	385	379	363	227	167	296	744	1,267	833	3,811	3,189	7,000	13·12	14·11	13·56	10·95	21
22	Hyderabad ...	11	11	864	864	1,281	990	960	702	587	501	393	366	566	1,449	2,350	2,036	6,570	5,561	12,131	19·47	20·33	19·85	13·17	22
23	Thar and Párkar...	13	13	901	901	1,589	1,389	1,202	1,038	898	619	430	336	423	839	1,350	1,125	6,029	5,249	11,278	24·98	27·33	26·02	16·80	23
24	Nawabshah ...	9	9	721	721	1,285	918	989	692	641	457	350	355	699	1,978	3,531	1,776	7,163	6,508	13,671	28·92	32·42	30·48	15·69	24
25	Lárkána	15	15	737	737	1,630	1,143	1,153	1,050	862	660	563	437	954	2,839	5,601	3,533	10,549	9·928	20,477	20·37	32·92	30·99	19·33	25
26	Sukkur	12	12	684	684	1,220	883	988	906	839	678	651	570	1 370	4.587	6,188	4,445	12,019	11,312	23,331	38·48	43·37	40·68	17·40	26
27	Upper Sind Frontier	6	6	422	422	616	484	375	350	324	306	220	195	476	2.921	2,668	1,561	5,335	5'161	.10,496	36·66	43·94	3 ·91	14·12	27
	Total for the Presidency ...	360	360	26,253	24,293	25,722	21,044	24,977	20,839	18,418	16,150	17,754	18,116	20,978	33,895	44,640	36,391	152,054	146,865	298,919	14·92	15·62	15·26	13·06	

ANNUAL FORM No. X.—DEATHS *registered from* DYSENTERY *and* DIARRHŒA *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1917.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	22	22	1,438	411	77	57	101	85	82	86	121	195	162	174	155	127	713	709	1,422	1·37	1·38	1·37	1·78	1
2	West Khándesh ...	10	10	1,096	146	17	16	25	16	15	18	36	33	28	24	31	20	144	135	279	·49	·47	·48	·71	2
3	Násik	19	19	1,649	391	54	51	60	52	64	89	127	155	172	176	148	108	692	559	1,251	1·52	1·24	1·38	1·40	3
4	Thána	17	17	1,643	333	81	55	77	26	61	48	89	143	108	84	66	68	524	377	901	1·15	·88	1·02	·86	4
5	Kolába... ...	14	14	1,461	481	78	69	85	70	52	54	127	234	195	99	60	105	645	583	1,228	2·18	1·95	2·06	1·61	5
6	City of Bombay ... — *Central Registration District.*	1	1	1	1	153	159	161	176	212	193	232	293	263	218	185	241	1,359	1,127	2,486	2·16	3·38	2·58	3·14	6
7	Ahmednagar	15	15	1,348	703	149	132	132	116	141	185	319	358	404	471	492	162	1,613	1,448	3,061	3·39	3·09	3·24	3·75	7
8	Poona	18	18	1,201	568	141	113	175	147	149	199	350	461	404	333	281	272	1,611	1,419	3,030	2·99	2·69	2·85	3·79	8
9	Sholápur	10	10	718	515	197	143	189	115	103	156	306	287	284	310	344	333	1,442	1,328	2,770	3·68	3·53	3·61	5·70	9
10	Sátára	19	19	1,346	706	208	137	173	129	166	178	334	586	510	467	288	270	1,687	1,755	3,442	3 13	3·24	3·19	3·73	10
11	Ratnágiri	15	15	1,311	522	163	114	125	98	61	62	142	185	123	97	127	177	815	659	1,474	1·49	1 01	1·22	2·89	11
	Southern Registration District.																								
12	Belgaum	15	15	1,070	735	307	234	258	252	285	342	560	665	523	480	319	267	2,187	2,305	4,492	4 57	4·97	4·77	3·71	12
13	Dhárwár	18	18	1,295	478	128	155	147	120	133	198	238	242	218	147	147	143	1,041	975	2,016	2·00	1·93	1·97	1·34	13
14	Bijápur	13	13	1,122	658	202	142	173	191	151	187	278	306	332	393	406	259	1,486	1,534	3,020	3·43	3·58	3·50	2·68	14
15	Kánara	16	16	1,265	336	111	98	87	49	55	65	123	171	160	119	99	106	654	589	1,243	2·97	2 80	2·89	2·34	15
	Gujarát Registration District.																								
16	Surat	12	12	760	196	29	34	33	38	30	67	79	66	48	64	61	71	340	280	620	1·04	·86	·95	·83	16
17	Broach...	9	9	409	135	7	7	13	23	28	43	19	24	37	37	63	72	188	185	373	1·19	1·25	1·22	·82	17
18	Kaira	15	15	586	277	36	43	62	53	73	80	87	125	99	118	109	93	551	431	982	1·49	1·34	1·42	1·53	18
19	Panch Mahális ...	7	7	660	77	1	4	6	9	1	14	10	19	19	21	20	29	80	73	153	·48	·47	·48	·24	19
20	Ahmedabad ...	13	13	880	250	86	70	106	52	58	86	95	108	86	141	176	139	661	542	1,203	1·53	1·37	1·45	·98	20
	Sind Registration District.																								
21	Karáchi	16	11	665	12	20	11	12	9	14	9	6	12	27	27	19	12	111	67	178	·38	·29	·34	·50	21
22	Hyderabad	11	9	864	40	37	32	34	25	20	15	12	17	33	56	55	183	191	374	·54	·70	·61	·35	22
23	Thar and Párkar ...	13	11	901	36	19	9	11	7	13	3	1	...	1	5	1	8	44	34	78	·18	·18	·18	·13	23
24	Nawabshah	9	5	721	15	3	2	2	...	...	...	2	...	1	12	5	3	16	14	30	·06	·07	·07	·11	24
25	Lárkána	15	8	737	8	...	1	2	...	1	...	...	...	1	3	7	1	10	6	16	·03	·02	·02	·04	25
26	Sukkur...	12	11	684	20	11	7	5	1	7	2	11	3	11	25	29	22	86	48	134	·27	·18	·23	·17	26
27	Upper Sind Frontier	6	6	422	35	3	8	2	4	2	8	3	7	12	8	2	6	32	33	65	·22	·28	·25	·10	27
	Total for the Presidency ...	360	339	26,253	8,085	2,318	1,908	2,256	1,863	1,981	2,382	3,707	4,695	4,261	4,091	3,696	3,163	18,915	17,406	36,321	1·83	1·85	1·85	2·04	

ANNUAL FORM No. XI.—DEATHS *registered from* RESPIRATORY DISEASES *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1917.*

1	2	3		4		5												6			7			8	9
No.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of Deaths per 1,000 of Population.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Respiratory Diseases were reported.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.													Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	22	22	1,438	1,023	498	440	458	352	356	248	273	388	432	536	655	651	2,784	2,503	5,287	5·34	4·83	5·11	4·44	1
2	West Khándesh...	10	10	1,096	600	182	189	187	151	147	104	161	117	160	167	237	222	1,057	907	1,964	3·60	3·16	3·38	2·92	2
3	Násik ...	19	19	1,649	1,074	410	372	526	341	386	273	334	345	396	447	593	378	2,335	2,466	4,801	5·13	5·49	5·31	4·30	3
4	Thána ...	17	17	1,643	425	106	96	115	77	94	107	75	74	81	100	158	131	699	515	1,214	1·53	1·21	1·37	1·06	4
5	Kolába ...	14	14	1,461	600	135	130	166	91	124	108	92	105	119	117	140	167	818	676	1,494	2·77	2·36	2·51	1·24	5
6	City of Bombay...	1	1	1	1	1,066	1,037	1,401	1,170	1,141	937	1,017	968	1,061	955	930	1,111	7,220	5,574	12,794	11·46	16·71	13·28	10·56	6
	Central Registration District.																								
7	Ahmednagar ...	15	15	1,348	991	429	303	399	294	326	375	416	443	564	607	681	795	2,738	2,899	5,637	5·76	6·18	5·97	4·38	7
8	Poona ...	18	18	1,201	794	482	424	519	407	407	377	478	551	616	752	904	892	3,438	3,371	6,809	6·39	6·40	6·39	3·76	8
9	Sholápur ...	10	10	718	474	272	176	148	113	169	142	137	152	169	254	351	419	1,158	1,344	2,502	2·96	3·57	3·26	2·07	9
10	Sátára ...	19	19	1,346	657	264	187	225	201	190	163	221	227	303	275	346	303	1,354	1,551	2,905	2·51	2·86	2·69	1·58	10
11	Ratnágiri ...	15	15	1,311	1,062	521	475	645	474	322	296	341	219	341	382	392	561	2,695	2,274	4,969	4·87	3·52	4·13	2·91	11
	Southern Registration District.																								
12	Belgaum ...	15	15	1,070	633	365	284	370	292	293	235	261	270	301	352	397	406	2,030	1,796	3,826	4·24	3·87	4·06	3·23	12
13	Dhárwár ...	18	18	1,295	862	513	396	445	384	278	242	308	375	416	367	430	505	2,258	2,401	4,659	4·34	4·75	4·54	3·91	13
14	Bijápur ...	13	13	1,122	751	334	235	289	264	243	221	232	250	257	303	425	431	1,877	1,607	3,484	4·33	3·75	4·04	2·77	14
15	Kánara ...	16	16	1,265	279	77	67	68	48	68	52	40	60	63	67	55	75	415	328	743	1·89	1·56	1·73	1·23	15
	Gujarát Registration District.																								
16	Surat ...	12	12	760	705	617	459	692	467	457	380	356	443	431	660	756	1,008	3,652	3,074	6,726	11·17	9·40	10·29	7·50	16
17	Broach ...	9	9	409	319	207	156	258	229	204	174	165	172	184	274	344	337	1,435	1,249	2,684	9·07	8·47	8·75	6·45	17
18	Kaira ...	15	15	586	515	466	462	741	577	467	488	435	473	528	600	752	679	3,742	2,926	6,668	10·11	9·10	9·64	9·49	18
19	Panch Mahals ...	7	7	660	260	47	27	71	47	38	31	27	64	51	47	90	106	415	231	646	2·50	1·47	2·00	1·03	19
20	Ahmedabad ...	13	13	880	564	625	574	845	621	532	467	531	576	647	782	940	1,009	4,410	3,739	8,149	10,21	9·46	9·85	5·90	20
	Sind Registration District.																								
21	Karáchi ...	16	11	665	37	104	122	134	122	135	85	72	75	70	68	85	77	689	460	1,149	2·37	2·04	2·23	2·14	21
22	Hyderabad ...	11	9	864	70	69	84	129	84	54	42	31	51	50	62	86	110	431	421	852	1·28	1·54	1·39	·95	22
23	Thar and Párkar.	13	13	901	165	95	61	99	71	20	13	4	10	3	10	24	29	285	154	439	1·18	·80	1·01	·52	23
24	Nawábshah ...	9	6	721	17	15	6	6	4	...	1	4	7	1	2	1	...	28	19	47	·11	·08	·10	·19	24
25	Lárkána ...	15	10	737	10	1	1	6	2	3	2	1	1	...	4	6	1	16	12	28	·04	·04	·04	·06	25
26	Sukkur ...	12	10	684	22	17	15	14	8	9	2	4	2	14	17	12	24	102	36	138	·33	·14	·24	·24	26
27	Upper Sind Frontier ...	6	5	422	22	2	5	3	2	2	2	3	2	8	7	2	15	39	14	53	·27	·12	·20	·13	27
	Total for the Presidency ...	360	342	26,253	12,982	7,919	6,783	8,939	6,893	6,465	5,567	5,959	6,425	7,269	8,214	9,792	10,442	43,120	42,547	90,667	4·72	4·53	4·63	3·47	

ANNUAL FORM No. XII.—DEATHS *registered from* PLAGUE *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1917.*

1	2	3		4		5												6			7			8	
No.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total.			Ratio of Deaths per 1,000 of Population.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.													Male.	Female.	Total.	Male.	Female.	Totals		
	Western Registration District.																								
1	East Khándesh...	22	22	1,438	586	2,104	4,172	1,957	504	78	21	399	1,207	1,807	2,035	1,619	1,914	8,812	9,005	17,817	16·90	17·56	17·23	·71	1
2	West Khándesh...	10	10	1,096	407	2,377	3,095	1,294	202	16	10	198	769	819	888	1,101	943	5,804	5,908	11,712	19·74	20·55	20·17	1·54	2
3	Násik ...	19	19	1,649	418	953	738	581	227	104	113	481	796	1,557	2,423	2,580	2,163	6,421	6,345	12,766	14·11	14·13	14·12	4·32	3
4	Thána ...	17	17	1,643	92	49	136	224	215	190	108	164	114	42	35	29	48	759	595	1,354	1·68	1·40	1·54	·57	4
5	Kolába ...	14	13	1,461	58	38	74	126	53	37	34	61	65	127	42	13	16	354	332	686	1·19	1·11	1·15	·58	5
6	City of Bombay...	1	1	1	1	47	97	268	357	305	141	136	113	71	70	50	43	1,223	475	1,698	1·94	1 42	1·76	2·04	6
	Central Registration District.																								
7	Ahmednagar ...	15	15	1,348	354	1,628	1,220	523	198	63	40	143	284	493	774	768	567	3,193	3,518	6,711	6·72	7·51	7·11	2·43	7
8	Poona ...	18	18	1,201	447	2,875	2,094	955	250	131	63	192	285	658	1,004	1,064	1,195	5,678	5,088	10,766	9 43	10·80	10·11	3·39	8
9	Sholápur ...	10	10	718	411	4,234	3,530	1,720	488	156	159	807	531	527	539	469	815	6,666	7,309	13,975	17·0	19·10	18·19	5·86	9
10	Sátára ...	19	19	1,346	632	2,418	2,979	1,803	1,061	523	454	1,037	2,175	4,337	5,547	5,421	4,126	15,451	16,430	31,881	28·67	30·31	29·50	3·81	10
11	Ratnágiri ...	15	7	1,311	26	18	18	38	62	44	36	32	23	22	10	13	22	170	168	338	·30	26	·28	·11	11
	Southern Registration District.																								
12	Belgaum ...	15	15	1,070	446	1,250	1,225	988	574	312	196	594	1,014	1,382	1,425	1,635	1,258	5,846	5,997	11,843	12·22	12·94	1·57	5·29	12
13	Dhárwár ...	18	18	1,295	494	1,336	1,092	604	287	126	122	523	1,009	1,112	1,030	1,042	891	4,517	4,647	9,164	8·69	9·2	8·94	4·97	13
14	Bijápur ...	13	13	1,122	356	846	915	579	213	54	75	197	424	763	1,158	1,451	1,221	3,738	4,158	7,896	8 32	9 6	9·15	5·99	14
15	Kánara ...	16	4	1,265	20	4	6	48	27	8	5	35	54	61	26	10	27	164	153	317	·75	·73	·74	·15	15
	Gujarát Registration District.																								
16	Surat ...	12	12	760	189	307	405	411	206	54	63	168	385	499	394	448	478	1,980	1,838	3,818	6·06	5·6	5·84	1·23	16
17	Broach ...	9	4	409	25	1	...	4	...	1	1	3	22	12	18	303	54 4	327	382	709	2 07	2	2 31	·18	17
18	Kaira ...	15	15	586	154	47	70	56	31	6	...	35	23	181	330	931	1,025	1,615	1,679	3,294	4 36	5 23	4 76	·09	18
19	Panch Mahals ...	7	6	660	39	13	12	13	...	1	5	17	1	3	35	139	459	322	376	698	1·94	2 40	2·16	·06	19
20	Ahmedabad ...	13	13	880	244	55	81	143	52	14	5	41	441	1,129	2,047	3,578	4,329	6,056	6,359	12,415	14·01	16 09	15·00	·05	20
	Sind Registration District.																								
21	Karáchi ...	16	7	665	9	...	15	146	421	448	111	10	14	24	12	5	12	719	498	1,217	2·48	2·20	2·36	1·62	21
22	Hyderabad ...	11	8	864	30	21	74	300	419	86	5	1	11	61	133	91	62	715	555	1,270	2·12	2·03	2·08	·47	22
23	Thar and Párkar.	13	1	901	1	...	1	1	1	...	...	...	...	...	...	...	...	3	...	3	·01		·01	·06	23
24	Nawábshah ...	9	6	721	7	...	1	6	6	6	...	...	...	...	...	...	...	14	5	19	·06	·0	·04	·07	24
25	Lárkána ...	15	2	737	2	...	...	1	...	...	...	...	...	...	...	...	3	3	1	4	·01	·00	·01	·02	25
26	Sukkur ...	12	7	684	75	...	1	1	3	3	1	...	...	...	46	94	318	275	192	467	·88	·72	·81	·14	26
27	Upper Sind Frontier ...	6	3	422	3	...	...	...	...	...	...	...	...	...	...	...	36	21	15	36	·14	·1	·14	·03	27
	Total for the Presidency ...	360	285	26,253	5,496	20,621	22,091	12,795	6,857	2,766	1,768	5,279	9,760	15,642	20,030	22,850	23,415	80,246	82,628	162,874	7·88	8·74	8·31	2·02	

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SECTIONS I TO IV.—No remarks.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

In accordance with Government of India's letter, Department of Education (Sanitary), No. 444, dated 16th July 1919, printed in the preamble to Government Order, General Department, No. 7282, dated 30th August 1919, certain changes have been made in Appendix IV—Annual Sanitary Forms of this report.

2. The birth and death ratios are calculated on the Census population of 1911.

3. *Europeans.*—During the year, among 30,192 Europeans, 291 births and 329 deaths were recorded against 388 and 415 in 1918. The calculated birth-rate was 9·64 per mille against 12·85 in 1918, and the death-rate 10·90 against 13·74. Of the 291 births, 152 were male and 139 female against 191 and 197 in 1918, while 205 male and 124 female deaths were recorded against 263 and 152 in 1918.

Of the 329 deaths, 26, 7, 4, 34 and 55 were due to cholera, small-pox, plague, fever, and respiratory diseases against 16, 25, 4, 89 and 50, respectively in 1918.

4. *Anglo-Indians.*—In a population of 8,902 souls, 162 births and 215 deaths were registered against 165 and 223 in 1918. The birth and death ratios per mille were 18·20 and 24·15 respectively, compared with 18·54 and 25·05 in 1918. Of the births 87 were males and 75 females against 95 and 70 in 1918, and of the deaths 112 were among males and 103 among females against 126 and 97 in 1918.

Of the 215 deaths, 9, 5, 1, 16 and 55 were due to cholera, small-pox, plague fever and respiratory diseases against 2, 5, 3, 43 and 52 respectively in 1918.

5. *Indian population.*—The population, including Sind, was in 1911 19,587,383. During the year no change was made in the number of registration units.

6. *Births.*—Five lakhs, forty-six thousand, four hundred and sixty births were registered showing a decrease of 72,764 from the figure for 1918 and 144,114 less than the decennial mean. The number of births recorded annually since 1909 is as follows:—

1909	...	657,685	1915	...	726,780
1910	...	689,701	1916	...	704,672
1911	...	705,090	1917	...	699,823
1912	...	684,890	1918	...	619,224
1913	...	684,803	1919	...	546,460
1914	...	733,076			

All the districts in the Presidency proper show a decrease in births while a small increase occurred in the Province of Sind. The W. R. D. shows a decrease of 26,558, Central 23,685, Southern 15,068 and Gujarát 10,506 over the figures for 1918. The main cause of this decrease was the severe pandemic of influenza in 1918. Persons between 20 and 40 suffered most heavily from influenza and the incidence of deaths was greater among women than men. Influenza has an influence on the birth-rate by reducing the population at the child bearing age; the birth-rate in 1919 would thus be adversely affected.

In the Presidency proper the rural circles in Ratnágiri, Kánara and Thána Districts are consistent in returning low birth-rates year after year. This is due in part to the difficulty of registration in the case of a scattered population and also in part to the debilitating effect of endemic malaria. Sátára, Poona and Kolába Districts also show a steady fall in the birth-rate.

With reference to the decrease in the birth-rate the Deputy Sanitary Commissioner, Western Registration District, reports :—

"In my opinion the real reason is the prevalence of epidemic diseases, especially plague and influenza. Plague epidemics upset the family life for months on end. But the real cause is the influenza epidemic of 1918 and its after effect."

The Deputy Sanitary Commissioner, Southern Registration District, reports :—

"In the absence of compulsory registration of births it is not possible to draw accurate deductions; but a careful study of the available figures for the last twenty years reveals no such fall in the birth-rate in this Registration District. But it must be pointed out that certain areas invariably report a more or less persistent low birth-rate. These areas are above-ghaut tálukas of the Kánara District, below-ghaut tálukas of the Kánara District, Nargund Petha, Bankápur, Kalghatgi, Kod, Hángal and Dhárwár Tálukas of the Dhárwár District, Bádámi Táluka of the Bijápur District and Khánápur Táluka of the Belgaum District, and Belgaum, Nipáni, Bijápur, Ilkal, Navalgund and Kárwár Town Circles and Belgaum Cantonment. The low birth-rate in these rural and urban areas is due to the following causes :—

(*a*) Defective registration. At all times Inspectors and Vaccinators discover unregistered births; and the discrepancies are shown in the Annual Sanitary Reports.

(*b*) The loss inflicted by plague and recently influenza on a large portion of the child-bearing community.

(*c*) Malaria and venereal diseases. These diseases sap the vitality at the child-bearing period and interfere with the fecundity of marriages. Venereal diseases are prevalent to a great extent in the below-ghaut talukas of the Kanara District; and the inhabitants of these tálukas go for agricultural pursuits after the rainy season to the above-ghaut tálukas, which are intensely malarial."

Deputy Sanitary Commissioner, Sind Registration District, reports :—

"There is no doubt that the low rate of births in Sind is to a very great extent to be attributed to faulty registration. In Sind all the work of registration of births and deaths is being carried on by voluntary agencies, *viz.*, by village registrars and tappedárs, who take little or no interest in the work. The work is done carelessly and very unsatisfactorily as mentioned in detail in the report of last year. But though the fact of persistent low birth-rate is noticed elsewhere, it is pleasing to note that in Sind the conditions have been different. It will be seen that the birth-rate since 1911 has been on the increase. It rose gradually from 20·49 per mille to 23·14 in 1916. The year 1917 showed however a drop to 20·97 and in 1918 a further considerable drop to 15·73 per mille. The chief cause of drop in 1917 was due to prevalence of malignant type of malaria and in 1918 an extremely virulent epidemic of influenza. These two epidemics were responsible for 114,142 deaths during 1917 and 281,966 deaths during 1918, respectively, which shows an increase of 52,635 deaths over the figures of five years (1913 to 1916 and 1919) put together.

The decrease during the year 1919 is due to the same epidemic of influenza. All the districts except Karáchi and Thar and Párkar however show an increase in birth-rate over the preceding year. The marked decrease in those two districts is due to the fact that in Thar and Párkar four tálukas (Mithi, Diplo, Chachro and Nagar Parkar) were depopulated during the year owing to scarcity of rains and fodder."

7. The birth-rate for the year for the Presidency and Sind combined was 27·90, for the Presidency alone 32·23, and for the Province of Sind 16·87. The rates recorded in other parts of India are given below :—

Bengal ..	... 27·5	Bihar and Orissa	... 30·46
Madras	... 28·52	United Provinces	... 32·39
Assam ...	... 30·52	Punjab ...	... 40·28
Burma ...	... 29·89	Central Provinces	... 34·31

In the Presidency proper the birth-rate for rural areas was 35·04 against 28·35 for urban areas.

8. Over rural areas the birth-rate varied from 48·52 for Jambusar Táluka in Broach District to 18·41 for Mokháda Petha in Thána District. Of the 188 tálukas, pethas and Maháls only 46, or 24 per cent., returned birth-rates above 35, of the remaining 142 returning birth-rates under 35, 76 returned rates of 30 per 1,000 as under, *viz.*, 1 (Navápur) in West Khándesh; 3 (Dindori, Igatpuri and Peint) in Násik; 8 (Dáhánu, Umbargaon, Máhim, Sálsette, Váda, Murbád, Bhiwandi and Kalyán) in Thana; 9 (Panvel, Alibág, Pen, Nágothna, Roha, Mángaon, Mahád, Karjat and Khálápur) in Kolába; 7 (Nagar, Akola, Shrigonda, Nevása, Kopargaon, Shevgaon and Páthardi) in Ahmednagar; 9 (Junnar, Khed, Ambegaon, Indápur, Sirur, Dhond, Haveli, Mulshi and Mával) in Poona; 2 (Pandharpur and Malsiras) in Sholápur; 6 (Málcolmpeth, Walwa, Shirála, Tásgaon, Khatáv and Koregaon) in Sátára; 10 (Málvan, Devgad, Rájápur, Ratnágiri, Sangmeshwar, Chiplun, Guhágar, Khed, Dápoli and Mandangad) in Ratnágiri; 1 (Khánápur) in Belgaum; 4 (Muddebihál, Bágevádi, Bijápur, Bágalkot and Bilgi) in Bijápur; 8 (Kumta, Honáwar, Sirsi, Siddápur, Yellápur, Mundgod, Haliyál and Supa) in Kánara; 1 (Párdi) in Surat; 2 (Daskroi, Modása) in Ahmedabad District. Bassein, Bándra, Mokháda and Sháhápur Tálukas of Thána District recorded birth-rates under 20 per 1,000.

9. Out of 84 towns 10 returned birth-rates over 40, *viz.*, Dohad (55·56), Yeola (48·05), Málegaon (47·13), Sholápur (47·61), Jambusar (45·82), Kapadvanj (42·51), Umreth (41·60), Dhandhuka (41·41), Gokák (40·54) and Borsad (40·21).

Nine towns recorded birth-rates of between 35 and 40, 49 towns or 58 per cent. recorded birth-rates between 35 and 20 per 1,000. In 16 towns the recorded birth-rates were under 20, *viz.*, Bhiwandi (18·80), Kárwár (18·12), Málwan (17·78), Ashta (17·75), Ratnágiri (16·50), Sátára (16·13), Lonávla (15·86), Nagar (15·64), Khed (14·53), Mahád (14·52), Kurla (14·39), Kalyán (14·36), Junnar (12·02), Panvel (10·97), Uran (10·97) and Karád (10·87).

In all these towns Municipalities are responsible for the public health and the figures show that sufficient attention is not given to registration. Poona City recorded a birth-rate of 20·94 per mille. The corresponding figures for previous three years were 6·94, 11·46 and 13·92 respectively. This shows some improvement in the registration of births in Poona City.

10. Twenty thousand four hundred and seventy-five births were recorded in Bombay City against 21,413 in 1918; the birth-rate being 21·25 against 22·23 in the preceding year.

11. In Sind 59,164 births were registered, an increase of 3,991 over the figure for 1918. The birth-rate for the year was 16·87 against 15·73 in 1918.

In the Presidency proper the rural exceeds the urban birth-rate. In Sind the reverse is the case, the urban rate being 37·29 and the rural 14·08. Of the 19 urban circles in Sind, two, Karáchi (52·65) and Rato-dero (42·87) returned birth-rates of over 40. Two, Rohri (39·32) and Sukkur (38·55) between 35 and 40; and four Hyderabad (34·18), Lárkána (33·88), Tando Adam (33·76) and Garhi Yasin (32·22) between 30 and 35. The remaining eleven recorded birth-rates ranging between the low figures of 24·64 in Sehwan and 8·20 in Halla. The birth-rate in Hyderabad has increased from 18·37 to 34·18, a difference of nearly 100 per cent. due almost entirely to improved registration.

12. For cantonments the highest birth-rate (33·27) was recorded in Ahmednagar. In the remainder it was less than 20, the lowest (3·58) being recorded in Poona Cantonment.

13. Out of 546,460 births, 285,195 were males and 261,265 females, a percentage of male to female births of 109·16 compared with the previous year's figure of 108·72. This proportion of male to female births registered varied from 102·92 in Belgaum District to 137·40 in Náwabshah District in Sind.

14. *Still-births.*—Nine thousand one hundred and fifty-nine still-births or 1·68 per 100 live births were registered. The corresponding figure for 1918 being 11,482 and 1·85. The percentage of still to live births varied from ·03 for Ahmednagar District to 9·80 for the City of Bombay. In Belgaum (2·41), Dhárwár (3·64), Bijápur (3·01) and Kánara (5·45) the percentages of still to live births were high as in previous years.

15. *Deaths.*—Six lakhs, thirty-seven thousand, one hundred and seventy deaths were registered against 1,724,674 in 1918 and 709,078 the decennial mean. Deaths among males numbered 335,548 and among females 301,622 against 847,472 and 877,202 in 1918. The following table shows the number of deaths recorded annually since 1909 :—

1909	505,936	1915	511,613
1910	560,003	1916	652,585
1911	555,312	1917	798,406
1912	683,210	1918	1,724,674
1913	521,539	1919	637,170
1914	577,504		

16. The recorded death-rate for the whole Presidency was 32·53 against 88·05 in 1918 and a decennial mean of 36·20.

The death-rates recorded in other parts of India are given below :—

Madras	27·23	Bihar and Orissa	40·00
Bengal	36·02	Punjab	28·34
Assam	30·09	United Provinces	41·69
Burma	31·09	Central Provinces	43·24

Excluding Bombay City and Sind the death-rate for the Presidency was 32·66 against 91·65 in 1918. The death-rates for rural and urban areas were 31·99 and 37·71 against 94·68 and 69·04 in 1918, respectively.

For districts the highest death-rate (48·44) was recorded in Kolába and the lowest (23·78) in Belgaum.

17. Of the 188 tálukas, pethas and maháls, 12 returned death-rates above 50, *viz.*, Mángaon (60·43), Pen (58·28), Khálápur (57·37), Mokháda (57·20), Khed (55·15), Nágothna (53·10), Karjat (52·81), Sálsette (52·78), Peint (52·27), Anklesh-war (50·95), Bhiwandi (50·26) and Panvel (50·16). Thirty returned rates above 40, *viz.*, Chálisgaon in East Khándesh, Dhulia, Sákri, Navápur in West Khándesh, Násik, Igatpuri, Chandgad, Nándgaon, Báglán and Kalvan in Násik, Bándra, Váda, Sháhápur, Murbád, Kalyán in Thána, Uran and Mahád in Kolába, Párner in Ahmednagar, Junnar and Ambegaon in Poona, Khandála and Shirála in Sátára, Olpád, Mándvi, Bárdoli, Válod, Chikhali and Bulsár in Surat and Broach and Wágra in Broach.

18. For urban areas there was a very wide variation in the death-rates ranging from 71·00 for Sholápur to 10·09 for Kárwár. Out of 84 urban registration areas, 15 returned death-rates over 40, *viz.*, Sholápur (71·00), Thána (66·36), Dhulia (60·18), Poona City (59·29), Pandharpur (55·06), Ahmedabad (49·03), Hubli (46·76), Alibág (44·07), Kurla (42·97), Bársi (42·88), Dákore (42·77), Násik (42·60), Nadiád (41·51), Broach (41·04) and Bándra (40·02).

19. The following table gives death-rates corrected in accordance with age and sex distribution for the few towns for which such correction is possible :—

	Standard death-rate.	Factor for correction.	Recorded death-rate.	Corrected death-rate.
Presidency	37·7	1	32·53	32·53
Sholápur	36·3	1·03	71·00	73·13
Poona	36·5	1·03	59·29	61·07
Karáchi	35·6	1·06	51·47	54·56
Ahmedabad	36·3	1·03	49·03	50·50
Bombay City	31·2	1·21	70·52	85·33
Surat	36·6	1·03	31·95	32·91

20. *Bombay City.*—The (uncorrected) death-rate for Bombay City was 70·52 against 59·44 in 1918 and a quinquennial mean of 36·19. The increase

is mainly due to cholera, respiratory diseases (pneumonia) and fever. The registered number of deaths was 67,936 against 57,264 in 1918. The number of infantile deaths was 13,456 equal to a ratio of 657·19 per 1,000 births.

21. *Ahmedabad City.*—The death-rate recorded was 49·03 against 72·51 in 1918 and a quinquennial mean of 57·02. The chief causes of death shown in the returns were fever and respiratory diseases. The birth-rate per 1,000 was 39·71 against 42·52 in 1918. The infantile deaths numbered 3,081 corresponding to a ratio of 362·51 per 1,000 births.

22. *Poona City.*—The death-rate was 59·29 against 50·74 in 1918. The birth-rate was 20·94 against 13·92 in 1918. During the year, 1611 infants under 1 year died against 1,352 in 1918. The infantile death-rate per 1,000 of births amounted to 609·53.

23. *Karáchi City.*—The (uncorrected) death-rate was 51·47 against 78·83 in 1918 and the birth-rate 52·65 against 50·87 in 1918. The infantile deaths numbered 1,975 equal to a ratio of 266·92 per 1,000 births.

24. *Surat City.*—The death-rate was 31·95 against 47·18 in 1918. The birth-rate was 24·61 against 28·36 in 1918. Nine hundred and twenty-eight infants under one year died corresponding to a ratio of 328·61 per 1,000 registered births.

25. *Sholápur City.*—The death-rate was 71·00 against 146·23 in 1918. The birth-rate was 47·61 against 43·75 in the previous year. The infantile deaths numbered 1,037 equal to a ratio of 356·85 per 1,000 births.

26. *Death-rate in Sind.*—The death-rate for Sind was 21·50 against 80·41 in 1918. The variation between the rate for urban areas (37·04) and that for rural areas (19·38) is very marked. The urban death-rate ranged between 9·73 for Halla and 51·47 for Karáchi.

27. *Death-rate in cantonments.*—The lowest death-rate (15·83) was recorded in Poona Cantonment and the highest (80·09) in Deoláli Cantonment.

28. Over the Presidency, as a whole, the deaths exceeded the births by 90,710. Figures for districts are given in columns 6 and 9 of Annual Form II and the following table gives the natural increase or decrease in population for the principal registration areas :—

	Excess of births over deaths.	Percentage increase on population.	Excess of deaths over births.	Percentage decrease on population.
Presidency (excluding Sind and Bombay City)	.....	.....	27,001	·18
Sind	.....	.....	16,248	·46
Bombay	.....	.....	47,461	9·41
Total for the Presidency ...	.....	.....	90,710	·46

29. *Mortality according to sex.*—Three lakhs thirty-five thousand five hundred and forty-eight male and 301,622 female deaths were recorded giving death-rates of 32·93 and 32·09 respectively against 83·18 and 93·33 for 1918. For every 100 females 111·25 males died. The corresponding figure for 1918 was 96·61. In Sind the ratio of male to female deaths was as 121·64 to 100.

30. *Infant Mortality.*—There were 110,348 deaths among infants corresponding to a ratio of 201·93 per 1,000 registered births against 286·93 in 1918; the male and female rates were 206·70 and 196·73 respectively as compared with 293·14 and 280·17 in the previous year. Of the 110,348 deaths among infants 41,821 were among infants under 1 month (23,044 under, and 18,777 over, one week), 34,804 between one to six months and 33,723 between six to twelve months. The percentages of these to total infant mortality were 37·9, 31·5 and 30·6 respectively.

Infantile deaths formed 17·32 per cent. of the total deaths against 10·32 in 1918.

The following is a short extract from the report on infant mortality by the Executive Health Officer, Bombay City Municipality :—

"The total mortality among infants or children upto one year of age recorded during the year under review was 13,534 showing an increase of 705 deaths compared with 1918 and of 4,715 above the average of the preceding quinquennium (1914—1918).

The percentage of infant mortality to total mortality at all ages was 19·72 against 21·97 in 1918 and 26·56 in 1917. The ratio per 1,000 of live births registered was 652·8 against 590·3 in 1918; the decennial average was 414·4.

These ratios are based on the actual number of births registered in the city; but for a correct estimate the infant mortality has to be calculated on the corrected number of births, so as to include infants who died during the year without their births being registered. The corrected number of births as we have seen above works out to 27,114 and therefore gives an infant mortality equal to the ratio of 499·15 per 1,000 of births against 434·8 in 1918 and 304·2 in 1917.

Debility and the diseases of the respiratory and nervous systems caused in the aggregate nearly 75 per cent. (10,143) of the total infant mortality (13,534) against nearly 79 per cent. (6,866) in 1917; in 1918 the proportion was slightly higher than in the year under notice.

Infants mortality by age-periods.—The following table classifies infantile deaths from principal causes under the three age groups of 1-30 days, 1-6 months and 7-12 months during 1919 :—

	Small-pox.	Measles.	Malaria.	Ague and Remittent Fever.	Diarrhœa and Dysentery.	Premature Births.	Debility.	Nervous system.	Respiratory system.	All causes.
1 to 30 days ...	·02	·02	·02	1·42	2·26	10·26	72·44	6·73	2·10	27·42
1 to 6 months ...	1·43	1·32	·16	4·71	3·90	·04	11·93	29·05	40·71	31·81
7 to 12 months ...	2·44	2·70	·12	3·55	7·50	·01	1·70	12·29	50·87	40·75
Total ...	1·46	1·52	·11	3·33	4·92	2·83	24·36	16·10	34·48	...

It will be noticed that out of 20,730 children registered as born in 1919 (*i*) 3,712 or 225 more than in the preceding year died within 30 days of birth; for a very large majority of these, namely, 2,689 or 72·4 against 2,606 or 74·7 per cent. in 1918, the cause of death assigned was Debility, that is want of vitality, immaturity at birth, wilful or ignorant neglect and the method adopted by the unskilled or untrained women attending the labour; (*ii*) 4,306 children being 126 more than in the preceding year died before attaining the age of 6 months, the cause of death in the descending order of incidence being 40·7. Diseases of the Respiratory system (against 40·4 in 1918) 29·05 diseases of the nervous system (convulsions) (against 29·2 in 1918) 11·9 debility (against 11·6 in 1918) 4·7 ague and remittent fever (against 4·3 in 1918) and 3·9 diarrhœa and dysentery (against 2·8 in 1918). It will be observed that out of the total mortality under 1 year of age, over 40 per cent. occurred in the age group of 7·12 months and further that of the deaths at this period of life more than half are due to the diseases of the Respiratory system. In the first and second age-groups the maximum mortality is due to debility (2,689) and the diseases of the respiratory system (1,753) respectively. The next most fatal cause is the diseases of nervous system (1,251) in the second and third groups (678) and next to it diarrhœa and dysentery in the third, all of which signify exposure and defective feeding.

Among Hindus of all castes taken together and Mussalmans who together form the bulk of the city's population, the ratios stand as under :—

	1919-1918.		Increase or decrease.
Hindus	737·92	655·83	+ 82·9
Mussalmans	562·36	570·35	— 7·99

The infantile death-rate for the whole city calculated on the total number of registered births was 65,287. Calculating for different castes on the number of births registered among them the highest infantile death rate was 1,453·70 registered among Jains against 1,281·65 in 1918 and the lowest 224·56 among Parsees against 62·50 among Buddhists in the preceding year.

Infant mortality by the number of rooms occupied.—It will be observed from the following statement that of the 20,730 live births registered in the city during the year 14,117 or 68·1 per cent. occurred in families living in a single room or sharing it with others and the number of deaths among such was 11,736 or 83·1 per cent. of the births against 76·7 in 1918; this proportion varies inversely as the number of rooms occupied; 56·4 per cent. in the case of two-room tenements against 49·8 in 1918; 35·8 per cent. in the case of three-room tenements against 37·4 in 1918 and 18·9 per cent. in families occupying 4 or more rooms and against 23·8 in 1918. The lowest percentage of infant mortality (11·17) occurred among children born in Hospitals.

Number of births and infant mortality by the number of rooms occupied in 1919:—

	One room and under.	Two rooms.	Three rooms.	Four or more rooms.	Road side.	Hospitals.	Total.
Births ...	14,117	1,988	402	507	46	3,670	20,730
Infant Mortality ...	11,736	1,123	144	96	25	410	13,534
Infant Mortality per 100 births registered. 1919 ...	83·13	56·49	35·82	18·93	54·34	11·17	65·28
1918 ...	76·72	49·88	37·47	23·87	133·33	7·92	59·03

Of the total number of 22,744 births (inclusive of still births) registered in the city during the year under review 11,330 or 49·8 per cent. were verified by the Municipal Nurses and Midwives; the figures show a decrease of 5·8 in the verification work compared with the preceding year.

The proportion of still births showed a slight increase of 2 over the figure for 1918.

The proportion of births wholly unattended increased by ·7 during the year to 5·1.

The percentage of confinements attended by unskilled women was 58·5 against 55·4 in 1918.

The percentage of confinements attended by qualified midwives (including Municipal) was 13·8 against 16·0 in 1918 while that of confinements attended by Municipal Midwives declined to 9·0 from 10·4 in 1918.

The percentage of children born in hospitals (22·3) showed a decrease of 1·5 below the figure for 1918.

The percentage of children born in a healthy condition was 75·3 as compared with 75·5 in the preceding year.

The percentage of children fed on breast was 78·4 being 9·3 more than in 1918. This is the highest percentage yet recorded.

The percentage of mothers who left home for work leaving their children to the care of others shows a decrease of ·7

The percentage of children dying within 30 days of birth (17·1) rose by 3·8 per cent. compared with 1918.

The mortality of infants in the first month of life is very high as will be seen from the following table compiled for all Registration Districts:—

Districts.	Under 1 month.	Between 1 and 6 months.	Between 6 and 12 months.
W. R. D. ...	40·3	32·3	27·4
C. R. D. ...	40·4	31·2	28·4
S. R. D. ...	41·	35·7	23·2
G. R. D. ...	34·7	33·7	31·6
Sind R. D. ...	41·1	21·1	37·8
Bombay city ...	27·4	31·8	40·8

The low percentage of deaths under one month in Bombay city as compared with mofussil districts may be explained by the fact that many mothers leave Bombay for confinment and return when the child is over one month old.

31. *Deaths by castes or classes.*—Deaths by classes in each collectorate are recorded in Annual Form No. V, Appendix IV.

32. The following table shews the number of deaths in 1919 arranged according to causes and contrasted with the returns for 1918 and with the mean

of the preceding five years which is unusually high owing to the influenza pandemic during the year 1918 :—.

	Mean for 5 years, 1914 to 1918.		1919.		1918.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Cholera ...	12,767	·65	51,551	2·63	8,834	·45
Small-pox ...	4,016	·20	6,232	·32	8,063	·41
Plague ...	77,148	3·94	9,626	·49	79,478	4·06
Fever ...	465,859	23·78	274,759	14·03	12,84,013	65·55
Dysentery and Diarrhœa ...	35,447	1·81	38,317	1·96	32,058	1·64
Respiratory Diseases ...	83,907	4·28	98,633	5·04	119,680	6·11
Injuries ...	7,858	·40	7,896	·40	7,761	·40
Other causes ...	165,954	8·47	150,156	7·67	184,787	9·43
Total ...	852,956	43·53	637,170	32·54	17,24,674	88·05

33. *Cantonments in Quasi-Native States.*—For comments on the causes of deaths, *vide* section VI. The total number of births registered in those cantonments, which are situated in quasi-Native States during the year 1919 was 2,102 against 2,340 in 1918, the birth-rate being 21·00 per 1,000 against 23·38 in 1918. There were 3,329 deaths equal to a ratio of 33·26 per mille against 48·30 and a ratio of 48·25 in 1918. The Statistics are tabulated below :—

Statement showing the names of cantonments with population and deaths from diseases for the year 1919.

Cantonments.	Population according to Census of 1911.	Area in square miles.	Average population per square mile.	Number of births.	Ratio of births per 1,000 of population.	Number of deaths from									Ratio of deaths per 1,000 of population.								
						Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	Other causes.	All causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	Other causes.	All causes.
Aden. Municipal limits ...	40,684	67/8	602	815	20·03	...	4	...	329	859	...	27	679	1,898	...	·10	...	8·09	21·11	...	·66	16·69	46·65
Aden. Purely civil population of cantonments ...	307	7/8	42	6	19·54	...	...	...	9	3	...	1	2	15	...	...	...	29.32	9·77	...	3·26	6·51	48·86
Baroda ...	3,478	1	3,478	47	13·51	10	...	...	22	3	...	...	20	55	2·88	...	...	6·32	·86	...	...	5·75	15·81
Deesa ...	7,129	5	1,425·8	146	20·48	...	...	...	112	2	...	...	23	137	...	...	...	15·71	·28	...	...	3·23	19·22
Mhow ...	22,360	6·5	3,440	275	12·30	2	1	...	233	5	...	1	234	476	·09	·04	...	10·42	·22	...	·04	10·47	21.29
Nasirabad ...	16,144	8·58	1,881	587	36·36	1	2	...	253	53	85	3	153	550	·06	·12	...	15·67	3·28	5·26	·19	9·48	34·07
Neemuch ...	9,786	4·52	2,165	217	22·18	1	...	...	79	12	50	1	54	197	·10	...	...	8·07	1·23	5·11	·10	5·52	20·13
Rajkot ...	201	·56	359	9	44·18	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	4·98	4·98
Total ...	100,089	100·87	992	2,102	21·00	14	7	...	1,037	937	135	33	1,166	3,329	·14	·07	...	10·36	9·36	1·35	·33	11·65	33·26

34. *Rainfall.*—The defect in average rainfall in 1918 resulted in the prevalence of famine and scarcity during the first period of 1919.

The south-west monsoon opened on the Konkan coast at the end of the first week of June. The current being fairly strong travelled rapidly northward occasioning heavy rain. It also penetrated inland and gave fairly heavy rain throughout the Presidency except in Gujarat where it was less marked. It was in excess of the average in West and East Khandesh, Nasik, Satara, Kanara, Kolaba, Thana and Surat and below the normal in the Kaira District in September.

35. *Price of grain.*—The prices of food grains were very slightly reduced during the latter part of the year. As the usual grain compensation allowance granted to low paid servants of Government was inadequate to meet the abnormal conditions produced by the war, a war allowance on a more liberal scale was given to those entitled to that concession.

SECTION VI.

HISTORY OF CHIEF DISEASES.

CHOLERA.

36. The number of deaths from cholera was 51,551 against 8,834 in 1918 and a decennial mean of 17,170. The following table gives the deaths recorded each year for the last 20 years :—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1900	163 889	1904	13,156	1908 ..	1,759	1912	64,505	1916	19,841
1901	13 600	1905	5,396	1909	28,714	1913	5,134	1917	17,003
1902 ..	3,229	1906	46,119	1910	3,694	1914	17,779	1918	8,834
1903	1,825	1907	7,656	1911	5,817	1915	377	1919 .	51,551

37. The epidemic was unusually wide spread and the mortality with two exceptions the heaviest of the last 20 years.

38. *Distribution.—Vide* Annual From No. VII. In the Presidency proper all districts were infected while in Sind 6 out of 7 districts reported deaths. Fourteen out of the 20 districts in the Presidency, including Bombay City, returned death-rates of over 1 per mille of population. The epidemic was chiefly felt in the districts of Kolába, Bombay City, Thána, Násik, West Khándesh, Surat, Ahmednagar, Poona, Broach, Sholápur, Sátára, Ratnágiri, East Khándesh and Panch Mahals. Two hundred and fifty-three Registration circles were affected. In the Presidency 17 per cent. and in Sind 8·8 per cent. of the villages were infected.

The epidemic reached its height in July, during which month 13,111 deaths occurred, and had practically ceased by December.

39. In the Western Registration District 23,109 deaths from cholera were reported against 1,412 in 1918. In December 1918 cholera was prevalent in all collectorates except Násik where it appeared in January 1919. The disease continued throughout the year in all districts, until November, when it ceased in East Khándesh and Násik, and by December it had entirely died out. Famine conditions and great scarcity of drinking water account for the prevalence of the disease, which began as the wells dried up. The epidemic attained its greatest intensity in June and July during which two months 10,448 deaths occurred out of a total of 23,109 for the year.

40. In East Khándesh 1,857 deaths were recorded equal to a ratio of 1·80 per 1,000 of population. All the rural and town circles with the exception of Nasirabad and Amalner towns were infected and 13 per cent. of all the villages reported deaths. Chálisgaon táluka and town recorded the highest death-rates of 7·04 and 6·77 respectively. In West Khándesh 2,575 deaths were recorded equal to a ratio of 4·43 per 1,000 of population. All the rural and town circles were infected and 18 per cent. of all villages reported deaths, 3 talukas returned death-rates above 5 per 1,000, *viz.*, Sákri táluka (12·64), Navápur (8·00) and Dhulia (6·34). In Násik District 4,025 deaths were registered corresponding to a ratio of 4·45 per 1,000. All the rural and town circles except Igatpuri town were infected and 21 per cent. of all villages reported deaths. Four tálukas returned death-rates above 5 per 1,000, *viz.*, Igatpuri (10·34), Báglán (8·28), Nándgaon (6·32) and Násik (5·13), Deoláli Cantonment recorded 9·73 and Málegaon town 6·19. In Thána District 6,465 deaths were registered equal to a ratio of 7·34 per 1,000. All the rural and town circles were infected and 27 per cent. of all villages reported deaths. Nine tálukas returned death-rates above 5 per 1,000, *viz.*, Bhiwandi (13·80), Sálsette (10·25), Wáda (9·56), Bassein (8·13), Máhim (7·06), Dáhánu (6·51), Bándra (6·51), Murbád (5·78), Sháhápur (5·07) ; while among towns, Kalyán recorded 9·84, Bhiwandi 9·03 and Thána 8·05. In Kolába District 8,187 deaths equal to a ratio of 13·78 were recorded. All the rural and town circles were infected and 36 per cent. of all villages reported deaths. Ten tálukas returned death-rates above 5 per 1,000, *viz.*, Mángaon (24·92), Karjat (16·89), Mahád (16·16), Khálápur (15·80), Panvel

(13·36), Pen (12·23), Nágothna (11·80), Uran (10·16), Roha (7·62) and Alibág (5·32); Mahad town recorded 7·12.

41. In the Central Registration District 14,089 deaths from cholera were registred against 3,780 in 1918. During the early months of the year, the only district that continued to return cases from previous year was Ratnágiri, which was infected from Bombay. The major part of the labour in Bombay is derived from Ratnágiri District. As a natural sequence most of the tálukas on the sea board of Ratnágiri District returned cases.

The Deputy Sanitary Commissioner, Central Registration District, remarks :—

> "Famine was prevalent in three districts of the Central Registration District. Cholera was first introduced at the Shevgaon Famine Relief Works from Paithan in the Nizam's State. The cases there were rather typical. In some of the villages investigated by me in Poona District, I found that there was initial fever, and the stools although loose were slightly bile coloured, whether it was a manifestation of an abdominal type of influenza or a modified form of cholera I am not prepared to say, as no bacteriological examination was made. It appeared in the other famine works in Ahmednagar and Poona Districts, but was quickly brought under control.
>
> During the month of July, the A'landi Pálkhi became infected along its route when passing between Bhor and Phaltan States, and infection was thus brought into Pandharpur."

42. In Ahmednagar District 3,755 deaths equal to a ratio of 3·98 were registered. All the rural and town circles were infected and 20 per cent of all villages reported deaths. Three tálukas returned death-rates above 5 per 1,000, *viz.*, Párner (9·34), Jámkhed (6·94) and Ahmednagar (6·08). In Poona District 3,757 deaths corresponding to a ratio of 3·53 were recorded. All the rural and town circles were infected and 25 per cent. of all the villages reported deaths. Three tálukas returned death-rates above 5 per 1,000, *viz.*, Khed (9·31), Dhond (5·37), Sirur (5·35); Khed town recorded 6·45. In Sholápur District 1,977 deaths equal to a death-rate of 2·57 were recorded. All the rural and town circles were infected and 21 per cent. of all villages reported deaths. Pandharpur town recorded the highest death-rate (6·62). In Sátára District 2,345 deaths were registered corresponding to a ratio of 2·17 per 1,000. All the rural and town circles were infected and 20 per cent. of all villages reported deaths. Khandála peta recorded the highest death-rate (5·78). In Ratnágiri District 2,255 deaths were recorded corresponding to a ratio of 1·87 per 1,000. All the rural and town circles were infected and 18 per cent. of all the villages reported deaths. Chiplun town reported the highest death-rate (9·57).

43. In the Southern Registration District 808 deaths from cholera were registered against 1,8 5 in 1918. All the collectorates reported deaths but the infection was of a mild type. Cholera was prevalent at the end of 1918 and it continued up to the end of October 1919.

The Deputy Sanitary Commissioner, Southern Registration District, reports:—

> "At the end of 1918 cholera was prevalent in all four districts of the Division. In January cholera was prevalent in Ankola, Honáwar and Siddápur Rural Circles, in Kumta town circle of the Kánara District and Kalghatgi Rural Circle of the Dhárwár District. In February Chandgad and Parasgad Rural Circles and Honáwar Town Circle were affected. In March Bhatkal Rural circle became infected. In April the disease spread to Bijápur, Indi, Gokák and Gadag Rural Circles. In May Chikodi and Athni Rural Circles and Bijápur, Nipáni and Belgaum Town Circles were attacked. In June the epdemic spread to Bágewádi Rural Circle, Bilgi Petha, Gokák and Hubli Town Circles, and Belgaum Cantonment, while in July Hukeri, Khánápur, Bádámi and Bágalkot Rural Circles, and in September Bhatkal Town Circle were affected. During November and December the whole Division was free from cholera."

44. In Gujarat Registration District 4,809 deaths from cholera were recorded contrasted with 102 in 1918. The disease first broke out on the 31st December 1918 in Umra village of Chorási Táluka of the Surat District, the first case being imported from Bombay. Bombay was also responsible for conveying infection to Kosamba village of Bulsár Rural Circle and Udhwada and Retlav villages of Párdi Rural Circle in January 1919. In Surat District 2,607 deaths were reported equal to a ratio of 3·99 per 1,000. All the rural and town circles were infected and 33·6 per cent. of all villages reported deaths. In Broach District 959 deaths corresponding to a ratio of 3·13 were registered. All the rural and town circles were infected and 32 per cent. of all villages reported deaths. Two tálukas recorded death-rates above 5 per 1,000, *viz.*, Wágra Táluka (8·24) and Ankleshwár (6·31). Cholera was first reported from Broach City on 17th January 1919, the infection having been brought from Bombay where cholera was prevailing. In Kaira District 650 deaths were registered equal to a ratio of ·94 per 1,000. All the rural and town circles except Mehmadabad Táluka and Borsad Town were affected and 9·3 per cent. of all villages reported deaths. Dákore Town recorded the highest death-rate of (5·39). In Panch Maháls District 479 deaths were reported equal to a ratio of 1·48 per 1,000. All the rural and town circles except Dohad Town were affected and 8 per cent. of all villages reported deaths, Hálol Táluka reported the highest death-rate of (5·18). With the exception of Ahmedabad and Viramgám Towns the Ahmedabad District was practically free from infection, only 114 deaths being recorded and only a few sporadic cases were reported from Gogo, Sánand two villages of Prántij Táluka and 4 of Daskroi Táluka.

45. In view of the deficient rainfall throughout Gujarát during 1918, the Deputy Sanitary Commissioner made a special effort to anticipate the outbreak of cholera by locating villages and towns where a shortage of water was to be expected, and by advising the authorities to take measures to increase the supply. He also drew up a scheme of preventive measures which included protection of water supplies, disinfection of wells by Potassium Permanganate and Chlorogen, cleansing of public thorough-fares in towns and villages, inspection of grain-godowns and cleansing of grain and rice, periodical inspection of soda water factories, bakeries and hotels in Municipalities, and the maintenance of cholera treatments with each talati. This was circulated to all Collectors, Civil Surgeons and Municipal authorities. In addition Inspectors of Vaccination were trained in the disinfection of wells by Potassium Permanganate and Chlorogen and they in their turn instructed Circle Inspectors, Municipal Secretaries, Patils, Talatis, Vaccinators and others.

An endeavour was thus made to persuade the Municipal and Local authorities and villagers to act not only during an outbreak of cholera but before its occurrence.

The Deputy Sanitary Commissioner notes in his report "it will be seen that those Municipalities which possess qualified Sanitary Officers and properly trained staff gave full effect to the recommendations made by this office, while other Municipalities did not adopt the recommendations to the same extent."

46. In Sind 316 deaths from cholera were recorded against 2 in 1918. The first case was reported from Karáchi City. It was imported from Bombay on 30th January 1919. On 19th April a case occurred in Jatoi village at a distance of about one mile from Pano Akil in Sukkur District. The Mukhtiarkar of the táluka only received information about this outbreak on 28th April when 15 cases had already occurred in neighbouring villages. The disease spread rapidly to other adjoining tálukas in Sukkur District then to Jacobabad and subsequently to other districts. Fortunately the epidemic was of a very mild type throughout the province. During the year a special class was opened at Karáchi for training of Municipal Secretaries and Sanitary Inspectors in the disinfection of wells.

47. In Bombay City 8,420 deaths from cholera were recorded equal to a death-rate of 8·74. Of the deaths, 8,171 occurred during the months of January and February. At the end of 1918 cholera was prevalent in Bombay City and the

infection continued practically up to the end of February 1920. Two hundred and forty-eight deaths were reported during the period March to September, but the infection was of a very mild type.

48. *Preventive measures.*—Táluka headquarters are now supplied with stocks of cholera treatments and of Potassium Permanganate or Bleaching Powder for sterilizing wells.

Instruction was given to Inspectors of Sanitation, Municipal Secretaries, Revenue subordinates and others in the proper use of these chemicals and they in their turn imparted instruction to village officials.

Four temporary Assistant Surgeons were appointed on cholera inoculation duty in the districts of Kolába, Thána, Surat and Ahmednagar during the year under report. In all 1,839 inoculations were performed by them. The vaccine being obtained from the Research Institution, Kasauli, and the Bombay Laboratory, Parel.

Dysentery and Diarrhœa.

49. Thirty-eight thousand three hundred and seventeen deaths, of which 20,546 were males and 17,771 females were recorded against 32,058 in 1918 and 38,153 the decennial mean. The death-rate was 1·96 against 1·64 in 1918 and 1·81 the mean of previous five years.

The number of deaths registered under Dysentery and Diarrhœa since 1908 is given below :—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1908 ...	40,781	1911 ...	31,549	1914 ...	42,961	1917 ...	36,321
1909 ...	35,039	1912 ...	57,039	1915 ...	31,707	1918 ...	32,058
1910 ...	46,643	1913 ...	34,021	1916 ...	34,187	1919 ...	38,317

50. The urban death-rate was 2·93 and the rural 1·77 against 2·30 and 1·50 in 1918, respectively.

The following table gives the towns in which mortality shows a marked increase or decrease :—

Increase.			Decrease.		
Towns.	Death-rate.	Mean of previous five years.	Towns.	Death-rate.	Mean of previous five years.
Násik	5·28	2·88	Poona	5·61	5·77
Thána	4·66	2·52	Kirkee Cantonment ...	4·77	5·03
Bándra	3·93	2·14	Sholápur	4·49	9·31
Khed	4·60	1·69	Pandharpur	6·80	7·52
Ahmedabad	3·47	2·22	Gokarn	5·66	7·05

51. *Dysentery.*—Under this separate heading 5,590 deaths were registered. The death-rate was ·28, the urban death-rate being ·86 and the rural ·17, 3 towns returned death-rates above 2 per 1,000, *viz.*, Kurla (2·65), Kalyán (2·14) and Kirkee Cantonment (3·77).

52. *Diarrhœa*:—Thirty-two thousand seven hundred and forty-four deaths were recorded under this heading. The death-rate was 1·67, the urban death-rate being 2·08 and the rural 1·59. Thirteen towns returned death-rates above 3 per 1,000, *viz.*, Násik (4·19), Deoláli Cantonment (4·00), Thána (4·29), Ahmednagar Cantonment (3·74), Poona City (4·10), Khed (4·10), Sholápur (4·44), Bársi (5·03), Pandharpur (6·41), Gokák (4·77), Athni (3·97), Gadag-Betigeri (3·71), Borsad (4·56).

In Viramgám Town water is obtained from a deep bore (139 feet) and contains a very high proportion of sulphates. It was feared that this might affect the health of the town, but the Deputy Sanitary Commissioner notes that in his opinion it has not done so. The quantity of salts in the water is diminisihng.

Fevers.

53. Two lakhs seventy-four thousand seven hundred and fifty-nine deaths (143,883 males and 130,876 females) were recorded as due to fevers against 1,284,013 in 1918 (influenza year) and a decennial mean of 357,238 which is high owing to the influenza pandemic during the year 1918. The death rate was 14·03 against 65·55 in 1918 and a quinquennial mean of 23·78.

The annual mortality attributed to fevers since 1908 is given in the following table :—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1908 ...	243,372	1911 ...	223,027	1914 ...	259,164	1917 ...	298,919
1909 ...	223,888	1912 ...	286,321	1915 ...	224,797	1918 ...	1,284,013
1910 ...	263,528	1913 ...	246,319	1916 ...	262,401	1919 ...	274,759

54. *Distribution.—Vide* Annual form No. IX. The highest death rates were recorded in the Collectorates of Thana (24·99), Kolaba (21·07), Thar and Parkar (19·92), Hyderabad (19·39), Nawabshah (18·96), Broach (18·15), Upper Sind Frontier (17·71), Nasik (17·15), Larkana (17·08), Sukkur (16·64), Ahmedabad (15·45), Poona (15·37), West Khandesh (15·31), Panch Mahals (14·55). In Bombay city 5,570 deaths were registered equal to a death rate of 5·78.

The urban death rate was 9·91 and the rural 14·82. The highest urban death rates in the Presidency proper were recorded in Kurla (30·83), Sholapur (29·74), Dohad (26·87), Barsi (24·21), Pandharpur (23·60), Nadiad (23·17), Anand (22·49), Thana (21·82), Viramgaon (21·78), Dakore (20·17), Kapadvanj (19·04), Ankleshwar (18·57), Dholka (18·48), Bhatkal (17·50), Dhandhuka (16·79), Yeola (15·79), Jambusar (15·57) and Poona city (15·27). In Sind the highest death rates were recorded in Garhiyasin (31·00), Kambar (29·43), Ratodero (25·69), Rohri (23·89), Mirpurkhas (23·06), Umarkot (21·53), Sehwan (21·49), Sukkur (21·39), Tando Adam (20·87), Shikarpur (18·91) and Larkana (17·16).

55. *Preventive measures.*—The preventive measures against malaria in the Presidency and Sind were limited practically to the treatment of sufferers with quinine. In the Presidency proper only 3 Sub-Assistant Surgeons could be spared for special duty, 2 for Panch Mahals District and 1 for Kolaba, while 3 touring Medical Officers were employed—2 for Surat District and 1 in Ratnagiri.

In Sind 5 Sub-Assistant Surgeons were appointed, 2 for Larkana District, 2 for Sukkur and 1 for Hyderabad District. They treated 4,467 cases of Malaria between them. Two touring Medical Officers employed in Sukkur District treated 554 cases of Malaria.

Two thousand eight hundred and twenty-seven lbs. of quinine against 2,407 lbs. in 1918 was sold or distributed free in the Presidency and Sind by the District Local Boards, Municipalities and Post Offices.

56. The Deputy Sanitary Commissioner, Central Registration District, carried out a cursory investigation into the question of the prevalence of Malaria in Poona City. He found that the increase of sickness appearing under this heading during 1919 was in reality due to Influenza and Measles. The Influenza being of a mild type following on the severe epidemic of 1918 was mistaken for Malaria. There is no doubt however that Malaria is endemic in the City, more particularly in Shanwar, Sadashiv and Narayan Peths, the wells appear to be one cause of the trouble. A detailed survey will be advisable as soon as an officer can be spared for the work.

The Health Officer, Ahmedabad Municipality, records a high mortality from Malaria which he attributes to defective surface drainage.

57. During the year Rs. 2,18,716 were spent on anti-malarial measures against Rs. 2,61,762 in 1918. Of this sum Rs. 54,033 came from Provincial, Rs. 1,41,309 from Municipal and Rs. 23,374 from Local Board Funds.

The chief items in Provincial expenditure were :—

(*a*) a grant of Rs. 25,000 to the Bombay City Municipality,

(*b*) Rs. 1,703 pay, allowances, etc., of Sub-Assistant Surgeons deputed on anti-malarial duty, and

(*c*) Rs. 27,000 for the purchase of quinine including the cost (approximately Rs. 25,000) of 14,56,300 quinine pills distributed free to the general public and school children in Kanara and Sind through the agency of village officers and school masters.

The expenditure in Bombay City amounted to Rs. 40,628 including the Government grant. Of this sum Rs. 16,880 were establishment charges, Rs. 579 were spent on disinfectants, Rs. 483 contingencies and Rs. 22,686 spent on filling up or covering over wells, tanks, etc.

In mofussil municipalities Rs. 76,695 were spent on filling up mosquito-breeding grounds; the chief amounts spent under this head were : Rs. 61,000 by the Karachi Municipality and Rs. 12,957 by the Hyderabad Municipality; while the Municipalities of Bijapur and Lonavla spent Rs. 421 and Rs. 495 respectively. Expenditure incurred by Local Boards under this head amounted to Rs. 9,459 including the grant of Rs. 5,730 from the Sanitary Board for filling in a pit near the village of Alikhan in Larkana District. The chief amounts spent on works of this nature by other Local Boards were Rs. 2,692 by Sukkur and Rs. 688 by Panch Mahals. As regards expenditure on oil and disinfectants for the treatment of mosquito-breeding grounds, Rs. 19,000 were spent by the Karachi Municipality, Rs. 303 by Poona and Rs. 297 by the Municipalities in East Khandesh. The total expenditure under this head being Rs. 20,000. On the free distribution of quinine the Municipalities spent Rs. 3,690, the largest amounts being Rs. 2,000 by the Karachi and Rs. 534 by the Poona Municipalities. The District Local Boards spent Rs. 12,294 on free distribution of quinine, of which the chief items were Rs. 3,800 (Sukkur), Rs. 1,000 (Hyderabad), Rs. 944 (Karachi), Rs. 1,424 (Dharwar) and Rs. 768 (Kaira).

On the quininization of schools the municipalities spent Rs. 280 and the District Local Boards Rs. 1,041 against Rs. 1,049 and Rs. 10,621 in 1918. Though the expenditure was much less the measure was carried out extensively in the Districts of Hyderabad, Sukkur, Nawabshah and Upper Sind Frontier, with the aid of quinine tablets (1,60,900) supplied by Government. Quinine was also distributed to some extent in the Municipal Schools in Hubli and in some of the Local Board Schools in Dharwar, Bijapur and Kanara Districts.

58. The details of sub-heading of deaths from fevers are given below, but the information cannot be guaranteed for accuracy.

59. *Malaria.*—Twenty-six thousand eight hundred and forty-one deaths were recorded under this head. The death rate was 1·37. For Western, Central, Southern, Gujarat and Sind Registration Districts, the total deaths were 496, 10,341, 8,570, 928 and 6,260 respectively. In Bombay city 246 deaths were reported.

The urban and rural death rates were 1·18 and 1·41 respectively. The highest urban death rates were recorded in Garhi Yasin (25·65), Kapadvanj (13·03), Dholka (11·40), Jambusar (11·01), Lonavla (7·89), Mirpurkhas (7·41), Tando Adam (6·39), Kumta (6·01), Tatta (4·75), Poona city (4·33), Khed (3·97), Ilkal (3·91), Gadag Betigeri (3·84), Shikarpur (3·73), Surat (3·10), Bulsar (3·07), Kotri (2·62), Honawar (2·60), Hubli (2·54) and Guledgud (2·49).

For rural areas the highest death rates were recorded in the districts of Poona (6·35), Kanara (5·05), Ahmednagar (3·48), Bijapur (3·20), Sukkur (2·91) and Thar and Parkar (2·79).

60. *Enteric Fever.*—Two thousand seven hundred and forty-nine deaths were recorded under this head, the death rate was ·14. For the Western Central, Southern, Gujarat and Sind Registration Districts the total deaths were 1,310, 1,342, 26 and 624, respectively. In Bombay city 116 deaths were recorded.

The urban and rural death rates were ·33 and ·10 respectively. The highest death rates for urban areas were recorded in Shikarpur (5·75), Kambar (3·02), Poona city (2·19), Gokak (1·91) and Hubli (1·90).

61. *Measles.*—Six thousand two hundred and seventy-nine deaths were registered equal to a death rate of ·32. For the Western, Central, Southern, Gujarat and Sind Registration Districts the total deaths were 446, 1,370, 1,219, 2,100 and 584 respectively. In Bombay city 560 deaths were reported.

The urban and rural death rates were 1·01 and ·19 respectively. The highest death rates for urban areas were recorded in Broach (5·17), Nadiad (4·05), Ahmedabad (3·57), Gadag Betigeri (3·06), Viramgam (2·99), Kapadvanj (2·82), Ankleshwar (2·56), Dholka (2·26), Pandharpur (2·24), Jambusar (2·22), Mirpurkhas (2·06), Poona city (2·04), Surat (1·58), Karachi (1·44), Dharwar (1·43), Dakore (1·41), Hubli (1·37), Shikarpur (1·32), Dohad (1·29) and Sholapur (1·15).

62. *Relapsing fever.*—Only 152 deaths were reported, all from Bombay city.

63. *Kala Azar.*—Three deaths were reported from Bombay city. The disease is practically unknown in this Presidency.

Plague.

64. Nine thousand six hundred and twenty-six deaths (4,924 males and 4,702 females) were recorded against 79,478 in the previous year. The quinquennial mean death rate was 3·24.

The annual number of deaths since 1908 is given below :—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1908 ...	27,345	1911 ...	10,399	1914 ...	20,060	1917 ...	162,874
1909 ...	24,319	1912 ...	28,984	1915 ...	43,824	1918 ...	79,478
1910 ...	25,043	1913 ...	25,288	1916 ...	79,507	1919 ...	9,626

Never during the past 20 years has the Presidency been so fortunate in the incidence of this disease. The greatest number recorded in any previous year was 281,269 in 1903.

65. *Distribution.*—Three Districts accounted for 6,040 of the total deaths, namely, Dharwar, West Khandesh and Satara. In the Presidency Proper mortality was heaviest during the later portion of the year.

The highest death rate was returned from West Khandesh Districts (3·72) and the lowest from Ahmedabad (·01).

66. In Dharwar District 2,438 deaths were recorded, the death rate being 2·38 against 5·43 in 1918 and the quinquennial mean of 6·15. All talukas with the exception of Nargund Peta, Ranebennur, and Navalgund T. C., were attacked. Hubli and Bankapur rural Circles and Hubli T. C. suffered heavily. Ten out of 85 market places in the District were infected while 7 per cent. of the towns and villages reported deaths.

Nine thousand six hundred and thirty-two persons were inoculated, 600 by Temporary Assistant Surgeons on inoculation duty, 8,762 by Assistant and Sub-Assistant Surgeons and the remainder by other Medical Officers. Most of this work was done in the latter part of the year, Hubli town contributing 6,389 to the total.

67. In Belgaum District the recorded plague deaths were 578. The death rate was ·61 as against 5·02 last year and a quinquennial mean of 7·48. Six talukas were more or less affected.

During the period under report rat destruction operations (by baiting) were continued under Temporary Assistant Surgeon Gokhale, three places being selected for special treatment, *viz.*, Athani and Shedbal in Athani Taluka

and Gokak in the taluka of that name. In Athani baiting was continued for about 6 months and resulted in the destruction of 5,051 rats. At Shedbal 4,478 rats were accounted for during seven weeks' campaign; 2,738 at Gokak during a period of about 12 weeks. All these towns escaped infection, Eight out of 72 market places and 3 per cent. of the towns and villages of this District were infected. Four hundred and fifty-five inoculations were performed and evacuation of houses was resorted to by the people.

68. A scheme for rat destruction on an extensive scale in the Belgaum and Dharwar Districts was sanctioned by Government in December under General Department Order No. 10858 of 12th December 1919 and has been put into execution since January 1920 under Dr. Strickland, M.A., B.Sc.; a detailed account of the operation will be submitted in next year's report.

69. The Deputy Sanitary Commissioner, Western Registration District, says in his report that :—

> "At the beginning of the year the District was practically free from plague, only 9 deaths being reported in January, of which 5 were in the Thana Collectorate. The disease continued throughout the year in Thana, every month showing cases but the total for the year only amounted to 182. Of recent years it has been observed that although plague cases are continually being reported in Bombay city and the adjoining Konkan Districts of Nasik the disease has however been unable to establish itself in an epidemic form; this peculiarity shows itself as markedly in Bhivandi, Thana and Kalyan where no preventive measures are taken and where the sanitary arrangements are most primitive, as in Bombay itself. In the other Konkan Collectorate, Kolaba, only 128 deaths occurred during the year, the three months January, June and July being free."

70. East Khandesh District remained quite free from plague until September when it was imported from West Khandesh and, becoming localized, caused 430 deaths. The death rate was ·42 against 3·58 in 1918 and the quinquennial mean 4·35. Out of 1,438 villages 20 reported deaths. All the cases occurred in September and December.

71. In West Khandesh District 2,194 deaths were registered against 2,959 in 1918. The death rate was 3·78 against 5·10 in 1918 and a quinquennial mean 6·39. Six out of ten Registration Circles, forty-two towns and villages, and six market places were infected. A few cases, apparently sporadic, were returned during the first 4 months of the year while May and June were blank, but in July the disease made its appearance in Dhulia Town where it caught hold at first slowly and with apparent difficulty but later culminated in a virulent outbreak causing 1,169 deaths in the town. The disease spread to the neighbouring villages and talukas showing a marked similarity to the manner in which it began in Dhulia Town by the slowness and apparent difficulty it had in establishing itself. Instead of the usual repaid spreading of the outbreak in distant localities through the agency of travellers from the affected area, the disease remained confined to talukas contiguous to Dhulia.

Ratting operations were carried on energetically in Dhulia Town, the entire plague staff being directed to that place. Five hundred traps were employed over a period of one year, upwards of 20,000 rats being accounted for but without any apparent beneficial results. Inoculation was tried but not accepted readily by the people, only 3,783 persons out of a population of 30,000 availing themselves of this well proved prophylactic. Some difficulty was experienced in making evacuation effective owing to a heavy monsoon and the high prices to which hutting materials were run up by the unusual demand. This was effectively got over however by the opening of depots for the sale of such materials at cost price and distribution gratis to the very poor people; coercive powers were not exercised until all other means had failed. A Plague Relief Fund raised for the provision of hutting materials, milk, food and other necessaries resulted in a sum of Rs. 2,459 being subscribed by the citizens.

72. In Satara District, 1,408 deaths were recorded. The death-rate was 1·30 against 9·29 in 1918 and the quinquennial mean 10·39. Out of 1,408 deaths 1,299 were reported from Shirala Peta alone which was the worst affected Taluka of the District and returned cases every month throughout the year. This Peta borders on Kolhapur State and generally receives its infection from that State. Routine ratting operations were continued in Satara Town by the Medical Officer of the Municipality. The average number of traps set daily during the year was 555, the number of rats destroyed being 24,451. The town was free from plague throughout the year.

Ratting operations were also carried out in Mahableshwar and resulted in the capture of 6·1 rats per house. A small epidemic of plague broke out in February and lasted till the end of March 1919. There were 4 cases and one death. The number of inoculations performed was 160. There were no attacks or deaths among the inoculated persons.

73. In Poona District only 74 deaths were recorded aginst 3,530 in the last year and the death-rate was ·07 against 3·31 in 1918. The quinquennial mean was 5·43. Out of 1,201 villages 15 returned cases.

It has been represented to Government that these operations should be continued for a further two years and extended to Cantonment and Railway areas and villages within a 5-mile radius.

From June 1919 concentrated trapping was carried on in the following localities as it is observed that these are affected in the beginning of the plague season :—

1. Mehunpura (Shanwar peth).
2. Bhaji Ali (Kasba peth).
3. Juni Bhaji Alli (Rawiwar peth).
4. Maharwada (Mangalwar peth).
5. Mumanpura (Ganji peth).
6. Bhokarwadi (Nana peth).
7. Maliwadi (Bhawani peth).

Trapping was also carried on in Malegaon Town of Nasik District. There were in all 740 traps and 10,890 rats were destroyed between 1st August and 31st December.

The town remained free from plague.

74. In Ratnagiri District 429 deaths were recorded against 467 in 1918, the death-rate being ·36 against ·39 in 1918 and quinquennial mean ·20.

More than half the number of deaths occurred in Ratnagiri Town. The remaining cases were reported from Ratnagiri Taluka and Mandangad Peta.

75. The Gujarat Registration District was practically free from plague throughout the year, an interesting fact in view of the steady rise in the incidence of this disease which has been noticed in Gujarat during recent years which has been attributed to the substitution of cotton and other more productive crops for grain, leading to importation of grain, and with it plague-infected rats, from other parts of India.

Ratting operations were continued in Bulsar town of Surat District up to the end of June during which period daily average number of traps set was 19. In all 734 rats were destroyed. The locality was free from plague.

76. In Sind Registration District 485 deaths were recorded, out of which 86 were in Karachi District and 372 in Karachi City, the death-rate being 2·65. The highest death-rate was returned from Tatta Town (4,84) and the lowest from Shikarpur town (·02).

Sind has never suffered very heavily from plague, the highest death-rate recorded during the last 20 years being 1·59 in 1918.

In all 685 inoculations were performed in Karachi city.

The total number of deaths recorded in Bombay city was 697 as compared with 1,133 for the last year.

77. *Inoculation.*—Inoculation was the chief measure relied upon for the prevention of plague. Only two Temporary Assistant Surgeons were engaged in this work while in addition inoculation was performed by Medical Officers in charge of Hospitals, Dispensaries, Private Medical Practitioners and others.

The total number of persons inoculated during the year under report was 28,307 compared with 86,571 in previous year. As will be seen from the following figures the bulk of these inoculations were done in the infected districts and the great drop in numbers is to be attributed to the mildness of the epidemic.

By districts the number of operations were 9,632 in Dharwar, 6,034 in West Khandesh, 1,642 in Bijapur, 1,605 in Ahmednagar and 1,325 in Poona. Hubli and Dhulia towns contributed 3,783 and 6,389 respectively. Seven thousand six hundred and ninety-six inoculations were performed in the Jails of the Presidency.

Forty-three cases were reported among persons who had been inoculated, of which 20 proved fatal (case mortality 46·51) as compared with 307 cases and 115 deaths (case mortality 37·46) in the previous year.

78. During the year under review the Plague Prevention Inquiry Laboratory and Staff were taken over by the Bombay Government from the Indian Research Fund. This Inquiry has been carried on for some time past by Dr. Chitre, Officer in charge under the supervision and control of Major J. C. G. Kunhardt, I. M. S., and has resulted in the elucidation of several problems connected with poison baits, traps, etc. A brief report by Dr. Chitre on the work done since November 1919 is attached.

A BRIEF REPORT SUMMARIZING THE WORK DONE AT THE PLAGUE PREVENTION LABORATORY, POONA, DURING THE PERIOD FROM 6TH NOVEMBER 1919 TO 31ST MARCH 1920.

The "Indian Research Fund Association," Simla, having discontinued their grant with effect from 6th November 1919, the Laboratory expenses are being financed since then by the Government of Bombay as per their General Department Order No. 10858, dated 12th December 1919. The nature of work carried out during the period from 6th November 1919 to 31st March 1920 is briefly described below. For the sake of convenience this has been grouped under the following heads:—

(1) Research work carried out chiefly with a view to improve methods of "Rat Destruction."

(2) Assistance rendered to Dr. C. Strickland, M.A.B.C., Medical Officer in charge Anti-plague Operations, Belgaum and Dhárwár Districts, in connection with the Belgaum and Dhárwár Rat Destruction Operations.

(3) Instructions in the subject of "Rat Destruction" given to Railway Employees as well as to Sanitary Inspectors and others.

(4) Assistance rendered to various officers in India.

(5) General work.

I.—Research work carried out chiefly with a view to improve methods of "Rat Destruction."

This has been carried on mainly under the directions of Major J. C. G. Kunhardt, I. M. S., who was actually on deputation at this laboratory from 7th February 1920 to 6th May 1920, and who paid several visits to this laboratory and kept himself in close touch with the work done.

Attempts, to effect further improvements in the methods of rat destruction by trapping, were carried out mainly on three lines, *viz.*, first, by studying different types of rat-traps and ascertaining the effect of various alterations in their mechanical features; secondly, by studying the effect of smearing different substances on to rat-traps; and thirdly, by determining the best substance to bait rat-traps with and the most effective way of baiting them.

Different types of traps were found to vary considerably in efficacy. It was found that by elongating the posterior chamber of French pattern cage traps by about 4½ inches an improvement of nearly 20 per cent. can be effected in the catch of rats. Moreover various observations have shown that attention to certain minute details in the construction of rat-traps is extremely important, and that they considerably influence the catch of rats by facilitating entrance while absolutely preventing escape from inside.

Certain types of break back traps were also tested and amongst them the "Zip" rat-trap, made by Oneida Community, Limited, Oneida, New York, U. S. A., was found to possess nearly twice as much efficacy as the other types experimented with.

As to the effect of smearing various substances on to rat-traps, from observations carried out with ghee, oil and vaseline it was found that all these substances act as marked repellents to rats, reducing the percentage catch (inside traps) from hundred to less than thirty.

A number of substances were also experimented with, in order to determine the best bait for rat-traps and none has been found so far better than bajri dough as far as Poona City Mus rattus is concerned. It was further determined by means of godown observations that by providing traps with a suitable feeding tray and a bait catch and by fixing the bait at a suitable place inside the trap out of reach of rats trying to eat it from outside, the efficacy of trapping could be considerably improved.

Attempts were also made to carry out further improvements in the methods of rat destruction by baiting. With this object in view the consumptive value of various substances was tested but none of them was found to possess a consumptive value higher than that of bajri dough so far as Poona City Mus rattus is concerned. A certain number of rat-poisons were also experimented with. All of them were found to be either ineffective or extremely repellent to rats, so much so that it was found difficult to determine the minimum fatal dose.

II.—Assistance rendered to Dr C. Strickland in connection with Belgaum and Dharwar Rat Destruction Operations.

Specifications for the construction—on a large scale—of the best type of rat-trap, suggested as a result of the observations carried out at this laboratory, were supplied to various firms and the samples supplied by them from time to time were tested inside rat-proof godowns and further suggestions for their additional improvements were supplied to them. As a result of all this, some of the firms have been able to supply improved pattern rat-traps to Dr. Strickland and the new traps have been reported to actually catch under natural conditions nearly ten times as many rats as those caught in the old type of traps previously constructed and which had been in general use in India.

Dr. Strickland further sent three Assistant Surgeons, three Sub-Assistant Surgeons, nine Sanitary Inspectors and twenty-four others, for training in the methods of "rat destruction." They came in six batches and were given free of charge a series of lectures and practical demonstrations and examinations were held from time to time.

Lastly such special experiments as were suggested by Dr. Strickland were carried out at this Laboratory and the results thereof were communicated to him.

III.—Instructions in the subject of rat-destruction given to Railway Employees and others.

Two railway employees and one municipal employee were also given lectures and practical demonstrations in subject of "rat-destruction."

IV.—Assistance rendered to various officers in India.

Samples of Barium Carbonate were received for examination from certain officers and Municipalities in India. Many of them were found to contain a very low percentage of Barium Carbonate and very high percentage of repellent impurities. As a result of the latter they were found to possess a very low consumptive value (in one instance as low as 7 per cent.) and were thus declared to be unsuitable for use as a rat-poison. As a result of data thus obtained Major J. C. G. Kunhardt, I. M. S., was able to submit a working specification for Barium Carbonate as a rat-poison to the Sanitary Commissioner with the Government of India. He has tentatively suggested that commercial Barium Carbonate when used as a rat-poison should not contain less than 90 per cent. of Barium Carbonate, more than 8 per cent. of Barium Sulphate, Silicate and other insoluable salts of Barium, and more than 2 per cent. of Barium Sulphide, Chloride, Oxide, Hydrate and other repellent salts of Barium.

As per instructions from the Sanitary Commissioner with the Government of India a certain number of rat-poisons were tested to determine their minimum fatal dose and their relative consumptive value and the results of the observations was communicated to him.

Every possible assistance was rendered to the Sanitary Commissioner for the Government of Bombay in disposing off certain references received in his office on the subject of plague. Moreover all the plague carrying over places for the whole of Bombay Presidency were marked from time to time and communicated to him.

V.—General Work.

(a) Visits of Officers.—Colonel J. B. Smith, B.A., C.B.M.B., I. M. S., paid a number of visits to this Laboratory and carried out a series of observations inside rat proof godowns to invent new types of traps and he was rendered every possible assistance. Professor Starling, Lieutenant-Colonel E. D. W. Greig, the Sanitary Commissioner, Central Provinces, the General Officer Commanding, Poona Division, Major Houston, I. M. S., Chief Plague Officer, United Provinces, the Executive Health Officer, Bombay Municipal Corporation, and several other officers kindly paid visits and were shown various experiments and given an idea of the nature of work done.

(b) Assistance rendered to Poona City Municipality.—During the last off-season when indigenous plague started in the Poona City, every possible assistance and advice was given to the Plague Inspector in charge of rat-destruction operations in dealing with the infection. In addition, the rat-trapping work carried out at Poona City was supervised occasionally and necessary advice was given to the Plague Inspector in charge of the operations from time to time.

(c) Assistance rendered to officers staying in Poona Cantonment.—Rat poison baits were supplied from time to time to certain institutions such as the Club of Western India, etc. Measures of rat-destruction lasting for some days were carried out at the bungalows of several Government officials staying at Poona Cantonment.

(d) Assistance rendered to Major J. C. G. Kunhardt, I. M. S., for writing the report work.—During the period of deputation of Major Kunhardt, I. M. S., lasting for nearly three months, every possible assistance was rendered to him in connection with the writing up of the first two interium Reports on Plague Prevention.

(e) A number of rat-fleas were sent in batches of 500 from time to time to the Assistant Director, Central Research Institute, Kasauli, to enable that officer to carry out observations with special reference to the immunity of certain areas from epidemics of plague.

Out of a total grant of approximately five thousand rupees sanctioned by Government, the total approximate expenditure during the period under report amounted to about three thousand and eight hundred rupees.

In conclusion the undersigned expresses his deep sense of gratitude to Major J. C. G. Kunhardt, I. M. S., and the Sanitary Commissioner for the Government of Bombay for the valuable advice and suggestions given by them from time to time in carrying out the work mentioned in this report.

SMALL-POX.

79. Six thousand two hundred and thirty-two deaths from small-pox were registered against 8,063 in 1918 and a decennial mean of 5,059. The death-rate was ·32 against ·41 in 1918 and ·20 the quinquennial mean. By sex, 3,242 were males and 2,990 females.

The annual mortality since 1908 is given below:—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1908 ...	2,526	1911 ...	4,727	1914 ...	4,209	1917 ...	3,095
1909 ...	5,019	1912 ...	6,331	1915 ...	1,425	1918 ...	8,063
1910 ...	4,600	1913 ...	9,833	1916 ...	3,289	1919 ...	6,232

80. *Distribution.*—Detailed figures are given in Annual Form No. VIII. All the districts reported deaths. The highest death-rates were recorded in the districts of Sholápur (1·08), West Khándesh (·88), Bombay City (·80), Kánara (·66), Násik (·52), Lárkána (·53), Poona (·35) and Dhárwár (·34). Two hundred and sixty-seven registration circles and 1,496 villages were infected against 209 and 1,496 respectively in 1918.

81. The Deputy Sanitary Commissioner, Central Registration District, reports that most of the infection occurring in that area was imported from neighbouring States and recommends that small-pox returns should be received from those States.

Much of the infection in Ratnágiri was imported from Bombay. In this district revaccination was carried out extensively with the result that the district which formerly returned large numbers of cases has now greatly improved.

82. Sholapur town recorded the highest death-rate of (8·55), Malegaon (3·07), Pandharpur (2·55), Honawar (3·96), Bhatkal (4·34), Hyderabad (2·17), Larkana (2·11) and Gariyasin (2·14).

Of the 6,232 deaths from small-pox, 1,424 were in infants under 1 year and 2,811 in children between 1 and 10 years of age.

Of the total deaths, 4,720 occurred in the first six months and 1,512 in the second half of the year. The greatest number of deaths 1,026 was recorded during March.

83. The Officers of the Department enquired into the vaccinal state of 822 cases of small-pox with the following results. Two hundred and ninety were found to have been vaccinated, of which 6 died; of the remaining 532 unvaccinated 76 died. The case mortality was therefore 2·1 among vaccinated and 14·3 among unvaccinated. The average age of vaccinated persons attacked by small-pox was 16 and for unvaccinated 8, while of those who died the average age among the vaccinated was 13 and the unvaccinated 6.

Respiratory Diseases.

84. Ninety-eight thousand six hundred and thirty-three deaths (54,248 males and 44,385 females) were recorded as compared with 119,680 in 1918 and a decennial mean of 71,445. The death-rate was 5·04 against 6·11 in 1918 and 4·28 the mean of previous five years.

The annual number of deaths registered since 1908 is given in the following table:—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1908 ...	54,671	1911 ...	51,470	1914 ...	65,941	1917 ...	90,667
1909 ...	53,433	1912 ...	70,712	1915 ...	63,364	1918 ...	119,680
1910 ...	59,880	1913 ...	59,418	1916 ...	79,882	1919 ...	98,633

The highest death-rates were returned from the collectorates of Surat (10·34), Ahmedabad (8·92), Broach (8·78), Kaira (8·31), Poona (6·84), Nasik (5·35), Ahmednagar (4·89), Ratnagiri (4·54), East Khandesh (4·26), West Khandesh (3·60), Dharwar (3·53) and Bijapur (3·30); Bombay city recorded a death-rate of (23·21).

85. For rural areas the death-rate was 3·29 against one of 14·02 for urban areas as compared with 4·24 and 15·76 respectively in 1918. The highest death-rates for urban areas were recorded in Poona city (22·40), Ahmedabad (19·74), Kaira (19·60), Broach (15·87), Kirkee Cantonment (15·29), Jambusar (13·57), Ahmednagar Cantonment (13·03), Surat (12·23), Matiari (11·10), Sehwan (10·10), Mirpurkhas (9·89), Nasik (9·86), Kapadvanj (9·45), Rander (9·36), Karachi (9·32), Alibag (9·23), Gadag Betigeri (9·10), Trimbak (9·07) and Hubli (9·05).

86. *Phthisis.*—Eighteen thousand two hundred and seven deaths from phthisis were recorded equa death-rate of ·93 for the Presidency as a whole. The corresponding figures for previous year for the Presidency Proper were 12,907 and ·85 respectively. For the Western, Central, Southern, Gujarat and Sind Registration Districts, the total deaths were 2,554, 5,329, 2,310, 4,752 and 796 compared with 1,780, 4,596, 1,791, 4,740 and 595 in 1918 respectively. In Bombay city 2,466 deaths were registered equal to a death-rate of 2·54.

The urban death-rate was 2·42 and the rural ·64. The highest death-rates for urban areas were recorded in Alibag (7·74), Deolali Cantonment (6·29), Ahmedabad (5·71), Satara (5·63), Poona city (4·71), Broach (4·63), Thana (4·44), Hyderabad (4·32), Kapadvanj (4·11), Ahmednagar (3·78), Panvel (3·61), Nasik (3·53), Bhiwandi (3·38), Ranebennur (3·38), Surat (3·36), Kaira (3·29), Gokak (3·28), Tatta (3·14), Erandol (3·04), and Ratnagiri (3·03).

The Deputy Sanitary Commissioner, Western Registration District, reports :—

"This year, as last year, the mortality from phthisis is actually greater in the Konkan District than in those above ghats. Mortality as compared with that of the last year is greater owing probably to the reduced vitality due to the after effects of the last pandemic of influenza and famine condition."

87. *Pneumonia.*—Twenty-three thousand three hundred and sixty-nine deaths were registered equal to a death-rate of 1·19. The urban and rural death-rates were 5·93 and ·27 respectively. For the Western, Central, Southern, Gujarat and Sind Registration Districts the total deaths were 298 2,315, 4,65, 3,252 and 2,304 respectively. In Bombay city 14,736 deaths were registered equal to a death-rate of 15·29.

The highest urban death-rates were recorded in Deolali Cantonment (18·31), Poona city (11·74), Matiari (9·56), Sehwan (8·84), Kirkee Cantonment (5·98), Mirpurkhas (5·77), Surat (5·49), Nadiad (4·42), Bandra (3·37), Gadag Betigeri (3·30), Tatta (3·05), Ahmednagar (2·80), Kalyan (2·70), Thana (2·56), Karachi (2·41), Tando Adam (2·20), and Broach (2·01).

The Deputy Sanitary Commissioner, Southern Registration District, reports :—

"Gadag Betigeri town circle returns the highest ratio of 3·30. At Gadag Betigeri there was an excess of deaths from fevers and respiratory diseases over the average of five non-influenza years (1913—17) by 115 and 82 respectively; so probably influenza was prevalent in this town and was responsible for this high ratio from pneumonia."

Injuries.

88. There were 7,896 deaths recorded, of which 4,472 were among males and 3,424 among females. The number registered in 1918 was 7,761 while the decennial mean is 7,555.

The number of deaths registered annually as due to injuries since 1908 is shown below:—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1908 ...	7,109	1911 ...	7,452	1914 ...	7,670	1917 ...	7,650
1909 ...	7,029	1912 ...	7,175	1915 ...	8,113	1918 ...	7,761
1910 ...	6,885	1913 ...	7,711	1916 ...	8,096	1919 ...	7,896

89. Deaths by sexes are arranged under the various heads and compared with those in 1918 in the following table :—

Causes.	Male.	Female.	Total.	Male.	Female.	Total.
	1919.			1918.		
Drowning	1,452	1,878	3,330	1,277	1,798	3,075
Poisoning	74	33	107	82	30	112
Hanging	163	83	246	146	65	211
Wounding	934	389	1,323	816	397	1,213
Wild beasts	41	11	52	33	11	44
Snake-bite	749	442	1,191	929	641	1,570
Rabies	173	88	261	154	84	238
Railway accidents	118	34	152	55	13	68
Other causes	768	466	1,234	722	508	1,230
Total ...	4,472	3,424	7,896	4,214	3,547	7,761

90. One thousand one hundred and ninety-one deaths were attributed to Snake-bites against 1,570 in 1918. The highest number occurred in Ratnagiri District (217), Thana (157), Satara (103), Kolaba (64) and Ahmedabad (62), while only one death was reported from Bombay city.

In the Southern Registration District in 24 cases the snake was identified as a cobra and in these the interval between the bite and death varied from a few minutes to 17 hours.

In Gujarat Registration District 54 deaths were ascribed to the bite of the "black serpent," probably the black cobra, and in these the interval between the bite and death varied from 15 minutes to 20 hours.

91. Two hundred and sixty-one deaths were reported from rabies (173 males and 88 females) against 238 in 1918.

The highest number (46) was reported from Ahmedabad District. Among towns the highest number (13) was returned from Ahmedabad. Bombay city reported four deaths against 11 in 1918.

92. There were 568 suicidal deaths (290 males and 278 females) against 517 (287 males and 230 females) in 1918.

The following table gives the details of deaths by suicides in a few districts returning the highest number of deaths :—

Name of District.	Details of deaths by suicides.				
	Drowning.	Poisoning.	Hanging.	Wounding.	Total.
Bijapur	50	5	.....	38	93
Dharwar	30	.....	35	.....	65
Thana	11	.....	25	4	40
Belgaum	7	3	24	4	38
Bombay City	25	18	2	5	50

Other Causes.

93. One lakh fifty thousand one hundred and fifty-six deaths (77,189 males and 72,967 females) were registered as compared with 184,787 in 1918 and the decennial mean of 153,483.

The death-rate was 7·67 against 9·43 in 1918 and a quinquennial mean of 8·47.

The annual number of deaths registered under this head since 1908 is as follows :—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1908 ...	124,275	1911 ...	130,871	1914 ...	159,720	1917 ...	181,877
1909 ...	128,495	1912 ...	162,143	1915 ...	138,006	1918 ...	184,787
1910 ...	149,735	1913 ...	133,815	1916 ...	165,382	1919 ...	150,156

94. *Deaths from child-birth.*—Three thousand two hundred and seventeen deaths were reported under this head. For the Western, Central, Southern, Gujarat and Sind Registration Districts the total deaths were 1,190, 179, 648, 174, and 1,026 respectively. In Bombay city no such deaths were separately tabulated during the year under report. Taking the Presidency excluding Bombay city as a whole one woman died as the result of child-bearing to every 164 live births. In the Western Registration District one woman died to every 106 births, in the Central Registration District one woman to 792 births, in Southern Registration District one to 158 births, in Gujarat Registration District one to 557 and in Sind one to 58 births, respectively.

The maternal mortality rate for urban areas was one to 70 births while for rural areas it was one to 204 births.

95. The number of deaths from the chief diseases for each collectorate by months, are shown in Annual Forms Nos. VII to XII.

Influenza.

96. Influenza of a mild type occurred in a few villages and towns scattered over the districts of the Presidency. Severe cases of influenzal pneumonia were rare. The Deputy Sanitary Commissioner, Gujarat Registration District, records a few cases of cholera which may in his opinion have

been examples of influenza of the intestinal type. Owing to the mildness of the epidemic inoculation was avoided by the people which corresponds exactly with their attitude towards plague inoculation.

97. The first and most serious outbreak occurred at Chandori a village in Niphad taluka of Nasik district on the 13th of August causing 185 cases and 57 deaths followed by an outbreak at Sarolethadi a village in the same taluka. This village returned 22 cases and 10 deaths. Village Chandori escaped lightly as only 2 per cent. deaths occurred among a population of 3,000 while the average for Nasik district was 8 per cent. The epidemic in the village lasted about one month. In all 276 cases and 92 deaths were reported from 11 towns and villages in Western Registration District.

In Thana district 67 cases and 20 deaths were reported, out of which 52 cases and 7 deaths occurred in Navpada Lunatic Asylum near Thana. The origin of the disease cannot be traced but the first case was noticed among the female inmates of the Asylum and the infection was mostly localized in the female quarters. The outbreak was of a severe type.

98. In Central Registration District the highest mortality occurred in Sholapur district which reported 193 cases and 65 deaths during November and December. The Konkan district of Ratnagiri was also badly infected. There the epidemic broke out in September and was at its height in November. In all 391 cases and 32 deaths were reported.

Poona, Satara and Ahmednagar districts escaped lightly. Four towns and villages were affected in Poona district, 7 in Satara, 2 in Ahmednagar, 12 in Ratnagiri and 7 in Sholapur.

99. An outbreak occurred suddenly in Belgaum cantonment. The origin could not be traced. There were seven cases among British and seven among Indian troops between 13th and 29th July but the outbreak was of a mild type and no case proved fatal. No further cases occurred in the Belgaum district until October when infection was brought by some merchants from Bombay into Konnur village of Gokak taluka. From here the disease spread to the neighbouring villages, 6 of which were infected. All had been infected during 1918. Influenza vaccine was not taken advantage of by the people.

In Bijapur district infection was first introduced into Halsangi a village of Indi Taluka, from Pandharpur. In all, 12 towns and villages were infected.

In Kanara district only Supa taluka was affected returning 50 cases and 1 death.

Infected villages were visited by the Sub-Assistant Surgeons and Circle Inspectors of the Revenue Department. People were advised to sleep in open air, burn all clothing soiled with nasal discharge or expectoration of the sick and to practise nasal douching and throat gargling with permanganate of potash. Leaflets giving precautionary measures to be takeu by individuals were distributed.

The following table gives case mortality :—

District.	Attacks.	Deaths.	Case mortality.	Percentage of male to female deaths.
Belgaum	211	32	15·17	128·57
Dharwar	208	73	35·10	87·18
Bijapur	318	72	22·61	105·71
Kanara	50	1	2·00	.....

100. In Gujarat Registration District there were only 171 attacks and 17 deaths comprising Surat, Panch Mahals and Ahmedabad districts. In Surat district only three villages were affected infection being conveyed from the Gaekwar's territory.

With regard to an epidemic in the Mission House at Godhra during September, the Civil Surgeon, Panch Mahals, reports that it broke out suddenly, recording 72 attacks in one day. On the day following, there were only seven

fresh attacks. The origin of the disease could not be traced. The infection was localised.

101. In Sind Registration District there were 1,008 deaths, Karachi city contributing 984 cases being imported from Bombay and Rangoon. Six places were infected.

102. There were six deaths among Europeans.

103. *Encephalitis Lethargica.*—In the month of November while influenza was prevailing in Karachi in epidemic form a few cases of Encephalitis Lethargica were noticed. At first these cases were mistaken for Hysteria or Sleeping Sickness and later as a complication arising from influenza or a cerebral manifestation of that disease. It caused some alarm and the outbreak of an epidemic of Encephalitis Lethargica spreading in the same way as influenza was feared.

104. Captains Maitra and Malone carried out investigations in Karachi and came to the following conclusions:—

1. Cases of Encephalitis Lethargica did occur in Karachi during the epidemic of influenza in November and December 1919.
2. None of the cases investigated showed an attack of influenza.
3. No evidence was found that the disease is contagious and no light was thrown on its etiology.

No two cases of Encephalitis Lethargica occurred in the same house or in neighbouring houses. Careful enquiry has failed to elicit any evidence that the disease has been transmitted from one case to another. A reliable history of ten cases shows that none of them suffered from influenza in 1918 or 1919. In one case there was influenza in the family during the epidemic of 1919 and another gave a history of influenza in his family in 1918. But in none of the remaining eight cases was there any history of influenza in the family or in the same house.

105. In Bombay city the outbreak owed its origin and was due to a recrudescence of the infectivity of the virus which had no doubt persisted among the people of Bombay since the end of the autumn epidemic of the previous year. The total number of deaths recorded during the period was 1,942, of which seven were among Europeans and Anglo-Indians.

SECTIONS VII AND VIII—No remarks.

SECTION IX.

SANITARY WORKS—CIVIL.

106. The number of mofussil Municipalities during the year 1919 was 156 with a population of 2,384,505. Bail-Hongal Notified Area has been lately converted into a municipal district. The combined income of the Municipalities (excluding Viramgaon, the records of which town were destroyed during the recent riots), was Rs. 1,58,30,947. Of this total Rs. 77,36,710 were raised by taxation.

The incidence of taxation per head of population averaged Rs. 3-4-0, an increase of eleven annas on that for 1918, and varied between Rs. 10-4-0 in Karachi City and $3\frac{3}{4}$ annas in Ashta (Satara District). The expenditure on public health measures in Karachi City was Rs. 8 per head of population and averaged slightly over Rs. 2 in the remaining mofussil Municipalities. In Bombay City the figure was at the rate of about Rs. 10. A special and general conservancy cess is levied in many of the Municipalities.

The following table shows the death-rates amongst Municipal populations in each District. Out of 156 Municipalities, 25 suffered from plague, 28 from small-pox and 77 from cholera, while one Municipality in each of the Bijapur, Karachi, Hyderabad and Nawabshah Districts reported prevalence of influenza.

Statement showing, by districts, combined Birth and Death rates for Municipalities in the Bombay Presidency during the year 1919.

Districts.	Number of Municipalities.	Ratio of Births per 1,000 of population.	Ratio of Deaths per 1,000 of population.				
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.
Ahmedabad	10	37·79	·33	·21	·01	·01	45·36
Kaira	9	36·03	·88	·01	·08	.....	35·04
Panch Mahals	2	30·92	1·91	·10	·03	.....	23·85
Broach	3	36·46	2·06	.....	·02	.....	38·91
Surat	3	25·18	1·74	·04	·04	.....	31·48
Thana	7	20·79	6·44	·85	1·55	.....	43·07
Ahmednagar	4	18·71	5·98	·76	·80	.....	32·65
East Khandesh	11	32·51	1·57	·04	1·42	.....	24·29
West Khandesh	7	31·55	2·08	·36	16·34	.....	43·92
Nasik	6	29·25	3·67	·88	·03	.....	35·97
Poona	12	20·94	1·50	1·23	·10	.....	49·01
Satara	12	20·90	1·85	·15	·03	.....	22·99
Sholapur	5	26·58	2·62	.....	.....	.....	21·08
Belgaum	6	27·61	·37	·13	1·11	.....	24·08
Bijapur	4	26·36	·01	·41	·03	·51	26·79
Dharwar	10	31·60	·01	·34	6·83	·03	37·91
Kanara	8	26·66	·85	1·21	·33	.....	25·73
Kolaba	7	18·98	4·62	·33	2·45	.....	36·55
Ratnagiri	4	24·32	2·32	·18	3·98	.....	29·66
Karachi	5	47·91	·03	·72	2·62	6·02	47·84
Hyderabad	6	30·07	·02	1·72	·18	·16	26·27
Sukkur	5	34·07	·49	·38	·02	.....	33·47
Larkana	5	23·78	.....	1·31	·06	.....	33·90
Nawabshah	2	32·29	.....	·14	·07	·14	23·86
Thar and Parkar	2	15·79	.....	·11	.....	.....	33·86
Upper Sind Frontier	1	20·19	.....	1·06	.....	.....	20·02

In five Districts the death-rate exceeded 40 per 1,000 of population. This heavy mortality was chiefly due to cholera and plague.

Particular attention is paid to conservancy by many of the Municipalities. The Deputy Sanitary Commissioners gave advice in sanitary matters in the

case of 17 Municipalities in the Gujarat, 13 in the Western, 10 in the Southern, 9 in the Sind, and 7 in the Central Registration Districts. Action was taken by many, both in regard to routine matters (conservancy, water-supply and prevention of spread of epidemics) and in measures of a more general nature. The Shingodi cultivation in the Bokh between Prantij and Kamalapur provided a fertile breeding ground for malaria carrying anopheles. Orders have been issued that no new seedlings should be allowed in the Nawi Bokh and plants should be removed from one-third of the area each year. Thus in three years the Bokh should be clear of such plants. Pavement was in 2 grain shops, in addition to 50 other shops and godowns, laid down during the year at Bulsar. Halalcore cess was introduced and two additional paved latrines constructed at Balapir Gate at Kaira. At Nadiad the census of pit-privies was completed, licences for offensive trades were issued and arrangements as regards the removal of latrines from the present site which is over-crowded are in progress. At Mehmedabad by-laws were framed regarding dangerous offensive trades and steps were taken to improve pole latrines. By-laws were also passed regulating the dairies and cattle sheds at Kapadvanj. At Mahuda separate sites were assigned for manure heaps and two blocks of latrines were constructed. All private latrines at Dakore were surveyed by the Health Officer, and the Sanitary Committee has sanctioned the issue of notices for those requiring repairs and alterations. The Nasik system of trenching night-soil was introduced. The Ahmedabad Municipality has proposed to remove stables and certain offensive trades from the City to the portion of the town planning area outside Jamalpur and Astodi gates. Nuisances on the Agra Road caused by the night-soil depot were removed by the Kurla Municipality. The work of filling up two dangerous wells in the hospital compound was completed, and a drainage scheme for the low-lying portion of the municipal district is in course of preparation at Bandra. At Dhulia two blocks of public latrines in Madhavpura will be completed. At Raver the Municipality has purchased a piece of land for a night-soil depot. Four flushing urinals were constructed at Nasik. Prickly-pear was burnt, Nasik system was adopted, a sand dam was constructed across the Mosam river and 4 watchmen protected water-supply at Malegaon. At Igatpuri special care was devoted to the surface cleanliness of the hitherto neglected parts of the town, and tanks were protected from pollution. Steps were taken for the destruction of stray dogs at Kharda. An attempt was made at Matheran to secure a water-supply at Olympia by digging a well but the experiment has proved unsuccessful. At Manjhand the low-lying bunds are gradually being filled up. The construction of a new slaughter house was sanctioned at Kotri. At Ghotki steps were taken to improve the registration of births and deaths. At Shikarpur improvements to markets have been carried out. The question of providing a satisfactory water-supply is receiving the careful attention of the Jacobabad Municipality.

During the year First Class Health Officers were employed in Karachi, Ahmedabad and Surat. A Health Officer was also entertained by the Poona Municipality but he resigned after two months' service. Dr. Amin took charge of the health officership of Ahmedabad on 19th August 1919, and Dr. Mhatre was relieved of his duties in Ahmedabad on 20th June 1919. Dr. Shiveshwarkar, Health Officer, Surat, worked satisfactorily. A Second Class Health Officer was employed at Bandra. Both Broach and Hyderabad (Sind) have employed non-qualified men to work as their Health Officers. Of the third Class Health Officers—Mr. Pendse at Nadiad worked satisfactorily and Mr. Joshi's appointment has removed the long-felt want of a Health Officer at Dakore.

Twenty-nine towns employed 51 trained Sanitary Inspectors as follows—Ahmedabad (9), Surat (4), Poona (4), Sholapur (4), Broach (2), Jalgaon (2), Karachi (2), Sukkur (2), Hubli (2),—(one served till the end of April). Bulsar Municipality entertained one Inspector but he went on leave on 8th September 1919 and the place is vacant. Godhra (1), Viramgaon (1), Dholka (1), Dhulia (1), Bhusaval (1), Nasik (1), Malegaon (1), Kurla (1), Bandra (1), Larkana (1), Belgaum (1), Athni (1), Dharwar (1), Gadag-Bettegeri (1), Bijapur (1), Bagalkot (1), Nagar (1), Satara (1) and Pandharpur (1).

Umreth Municipality has sanctioned the entertainment of a Sanitary Inspector.

107. For details regarding progress in water-supply and drainage projects reference is invited to the report of the Sanitary Board published as an Appendix.

108. A sum of Rs. 33,068-4-11 was expended in completing a road at Bandra—a 70 feet wide thorough-fare completing the link between the Mahim causeway and the new extension of the Ghodbunder road. The object of this scheme is to facilitate traffic between Bombay and Salsette. A grant of Rs. 17,185 was sanctioned by Government for the scheme.

The Lonavla Municipality spent Rs. 495-9-4 during the year and upto date has expended Rs. 5,404-5-4 on filling in a disused tank near the Parsi Fire Temple. The Sanitary Board sanctioned a grant of Rs. 3,960 for this work which is still in progress.

The Sanitary Board also sanctioned a grant of Rs. 14,040 for improving roads and drainage at Dhond.

109. The combined income of the 26 District Local Boards and 215 Taluka Local Boards was Rs. 88,49,132. The incidence of income per head was 8·6 annas against 7·7 in 1918. A sum of Rs. 4,70,225 was spent on communications by these bodies while Rs. 38,509 were spent on public health work.

Under Government Orders, General Department, Nos. 4755 and 5141 dated 9th and 28th June 1919, respectively, the following grants were placed at the disposal of the Commissioners of Divisions for distribution among the District Local Boards of the Presidency and Sind. The sums were incorporated by the Boards in the general revenues and utilized to improve communications, water-supplies, and objects other than educational, the provincial grant being specially utilised for road repairs.

Divisions.	Imperial.	Additional grant from Provincial Funds.
	For Communications, etc.	For Road repairs.
	Rs.	Rs.
Northern Division	1,82,000	2,14,000
Central „	2,08,000	2,48,000
Southern „	1,56,000	1,69,000
Sind „	1,54,000*	1,93,000

* Rs. 10,000 balance in reserve with the Commissioner in Sind.

Government also sanctioned a grant of Rs. 1,00,000 in aid of village water-supplies in their General Department Order No. 4473 of 28th May 1919 which was distributed as follows :—

Division.	From Provincial Funds.
	For improvement of village water-supplies.
	Rs.
Northern Division ...	32,000
Central „ ...	32,000
Southern „ ...	16,000
Sind „ ...	20,000

These grants were supplemented by allotments from Local Funds, and popular contributions, and were expended in constructing wells and tanks,

troughs and cisterns, in repairing old wells, deepening existing tanks, in boring and jumper operations and in closing step-wells.

One hundred and seventy-four wells were converted into draw-wells out of which 67 were in the Poona and 46 in the Ahmednagar Districts. The number of draw-wells newly constructed was 496 out of which 153 were in 54 villages of the Kanara Collectorate. The beneficial result of closing the step-wells has been noticeable in the reduction in incidence of guinea-worm. In some of the villages in Dhulia Taluka of the West Khandesh District this disease appears in the rainy season. It also exists at Godi village in Shirpur Taluka where the river bed is the source of the drinking water-supply. Measures were also taken by the District Local Board, Ahmednagar, Nasik and Thana for closing step-wells, and tanks and wells generally. The Ahmednagar District Local Board constructed parapet walls of improved design round the wells in that District.

110. During the year under report shortage of water was felt in many villages and famine conditions existed in certain Districts. As the supply in the drinking water wells gave out, new and less suitable sources of water-supply had to be used and to this was attributed the increase in intestinal diseases in affected areas. The importation of grain required constant supervision to prevent mouldy or otherwise unsuitable food-stuff being sold.

Famine was prevalent in the Panch Mahals, Poona, Satara and Ahmednagar Districts. Cholera was first introduced at the Sheogaon Famine Relief works from Paithan in the Nizam's State. It also appeared in the other Famine works in Ahmednagar and Poona but was quickly brought under control.

In other districts, where scarcity and distress prevailed, small village works under the Local Fund and Civil Agency were opened and gratuitous relief afforded by doles to the poor and to village servants, and by suspension of land revenue and grants of tagai.

Returns received from 23 Relief Camp Hospitals shew that 3,109 in-patients and 20,551 out-patients were treated. The following figures show the number of patients treated in poor-houses.

Chembur (Thana)	... 859
Sindkheda (West Khandesh)	... 178
Poona (Poona)	... 35
Nagar (Ahmednagar)	... 56
Shrigonda (Ahmednagar)	... 299

For the period under report, *viz.*, from November 1918 to September 1919, the health of the public as judged by mortality figures was below normal. This was due mainly to the ravages of the Influenza pandemic which caused an excess over the normal mortality estimated at 635,322 during the four months September to December 1918. Influenza had not quite disappeared and high mortality figures were the rule. Only four deaths were reported as due to starvation. The diseases associated with famine conditions Cholera, Dysentery, etc., were not unduly severe and when they occurred in Famine Relief Works they yielded promptly to the measures taken to check their spread which indicates that the stamina of the famine affected people was not seriously impaired. The combined total death-rate per mille of population for the eleven months under review was 40·51 for the thirteen affected districts and 41·55 for the six districts not declared affected by famine or scarcity. Evacuation and emigration on a big scale rarely occurred and then only amongst professional beggars whose sources of food supply naturally ceased with the onset of Famine.

The Deputy Sanitary Commissioners scrutinised Birth and Death Registers in the worst affected Districts. Enquiries were made at all the villages and towns visited by them regarding drinking water-supply, conservancy, food-supply, incidence of Influenza, scarcity and emigration. Advice was given to local authorities on measures calculated to safeguard the health of the people.

111. Progress made in the extension of village sites for the relief of overcrowding may be summarised as follows :—

In the Broach District land measuring 37 gunthas was acquired. The total amount of compensation paid being Rs. 425 out of which Rs. 342 were

paid by the villagers who took up the land and Rs. 83 by Government (to be eventually recovered from intending occupants).

In Ahmednagar District new gaothan sites have been acquired for old ones the latter having become uselese owing to liability to flooding by canal or tank water and to raising the level of sub-soil water. In one case, *viz.*, Brahmangaon-Takali, Taluka Kopargaon, the old gaothan site having become water-logged has been abandoned and land measuring 22·8 gunthas has been acquired for the establishment of a new village site. In two other cases Adhavwadi—a hamlet under Jeur, Taluka Nagar, and Mutkhal, Taluka Akola—new gaothan sites are being acquired, as there is a danger of the old sites becoming submerged under the Pimpalgaon Malvi Tank and Lake Arthur Hill.

In East Khandesh District lands were acquired at Waghri, Bhalod and Tarkheda villages.

In the Nasik District land was acquired in the village of Khakurdi in Malegaon Taluka only. Steps are being taken to extend the village sites at Kanawalli and at Shiggaon in the Dharwar District.

Sixty-two villages in the Bijapur District were found to be in need of additional gaothan. In 14 of these acquisition proceedings have been completed and the land occupied. In six cases Government land has been added to gaothan, while in twelve, acquisition proceedings are still in progress. In three cases draft notifications for the acquisition have been submitted to Government and in ten they are in preparation. Sites are being selected for the remaining seventeen villages.

112. There are 35 Notified Area Committees. Yellapur in the Kanara District was declared to be a Notified Area at the end of 1918 but it was abolished in the following November.

The population served by the Notified Area Committees during the year was 140,366 and the total income excluding opening balance came to Rs. 1,45,753 giving an incidence of income per head of Rs. 1-1-0.

The following tables give respectively the details of income and expenditure and the combined birth and death rates per District.

Statement showing income and expenditure of the Notified Area Committees during the year 1919-1920.

Districts.	Serial No.	Names of towns and villages.	Population.	Income including opening balance.	Expenditure.	Closing balance.
				Rs.	Rs.	Rs.
Broach ...	1	Palej ...	4,255	3,746	2,790	956
Thana ...	1	Andheri ...	3,749	84,731	45,703	39,028
	2	Borivli ...	4,577	18,367	13,858	4,509
	3	Malad ...	3,887	28,690	13,675	15,015
	4	Santa-Cruz ...	1,072	90,660	84,820	5,840
	5	Vila-Padle ...	4,820	47,724	37,414	10,310
East Khandesh ...	1	Chalisgaon ...	9,453	13,286	12,439	847
	2	Pachora ...	5,461	17,339	10,362	6,977
	3	Jamner ...	6,623	8,099	3,963	4,136
West Khandesh ...	1	Dondaicha Warwada ...	3,490	4,826	2,251	2,575
Nasik ...	1	Manmad ...	3,495	21,743	8,940	12,803
	2	Nandgaon ...	6,961	16,930	13,328	3,602
Poona ...	1	Dhond ...	3,112	790	790	*Nil.*
Sholapur ...	1	Madha ...	5,306	3,170	2,004	1,166
	2	Kurduwadi ...	5,760	9,660	3,234	6,426
	3	Malsiras ...	2,400	2,347	1,613	734
Belgaum ...	1	Khanapur ...	4,280	2,705	2,188	517
	2	Chikodi ...	6,897	8,259	4,940	3,359
Bijapur ...	1	Hungund ...	6,441	1,936	1,885	51
	2	Muddebihal ...	4,055	3,085	2,023	1,062
	3	Indi ...	4,745	1,740	1,316	424
Dharwar ...	1	Hangal ...	4,898	1,237	891	346
	2	Hirekerur ...	3,240	2,531	1,891	640
Kanara ...	1	Yellapur ...	1,500	900	699	201
Ratnagiri ...	1	Rajapur ...	6,349	28,696	22,500	6,196
	2	Dapoli ...	3,023	28,762	26,382	2,380
	3	Khed ...	4,300	3,173	2,094	1,079
Kolaba ...	1	Karjat ...	1,791	7,301	5,772	1,529
Sukkur ...	1	Mirpur Mathello ...	1,463	1,213	818	395
	2	Khanpur-Daharki ...	2,095	749	664	85
	3	Kote-Sultan ...	2,112	1,898	939	959
	4	Ubauro ...	1,881	1,221	1,214	7
Larkana ...	1	Mehar ...	2,045	13,017	6,609	6,408
	2	Khairpur-Nathan-Shah ...	2,194	4,185	258	3,927
Hyderabad ...	1	Tando Jam ...	2,636	4,072	972	3,100
Total ...	35	Total ...	140,366	4,88,828	3,41,239	1,47,589

Statement showing, by Districts, combined Birth and Death rates for Notified Areas in the Bombay Presidency during the year 1919-1920.

Districts.	Number of Notified Areas.	Ratio of Births per 1,000 of population.	Ratio of Deaths per 1,000 of population.					Remarks.
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.	
Broach	1	17·63	..	...	...	...	22·80	
Thana	11*	16·73	7·21	·26	·20	...	38·26	*Six supervise Building operations; they have collected no funds.
East Khandesh ...	3	35·03	3·16	·17	·09	...	29·22	
West Khandesh ...	1	26·93	4·30	...	...	...	21·23	
Nasik	2	19·77	3·59	·14	·29	...	29·34	
Poona	1	2 ·60	8·62	...	...	...	41·78	
Sholapur	3	23·44	2·02	·20	...	...	16·79	
Belgaum	2	34·62	...	...	·27	·63	21·11	
Bijapur	3	34·18	·07	·59	·07	...	24·28	
Dharwar	2	33·90	...	...	·25	...	20·22	
Kanara	1	33·41	·03	·25	·16	·19	22·54	
Ratnagiri	3	26·65	·21	...	...	...	25·17	
Kolaba	1	19·16	9·58	...	...	...	49·28	
Sukkur	4	...	Not available		...	...	...	
Larkana	2	...	Not available		...	...	...	
Hyderabad	1	...	Not available		...	...	...	

The following Notified Area Committees performed useful works :—

Road and gutter repairs and improvements to water-supply were carried out by the Chalisgaon and Jamner Committees. The improvements carried out by the Manmad Notified Area Committee were (*a*) the construction of latrines on Malegaon Road, (*b*) one slab-drain in front of new dharmshalla, (*c*) night-soil depot and katchra drain across the river, (*d*) closing of cesspools and soakage pits. At Nandgaon constructional improvements were effected in the bazars. The work of the Palej Committee continues to be satisfactory. The Committee has requested sanction to raise the toll on cotton-laden carts from one to two annas to enable it to improve the condition of the roads. The Dhond Committee is working on proper lines while the Pachora Committee is energetic in keeping the town clean.

Advice on public health matters was given by the Deputy Sanitary Commissioners to the Notified Area Committees at Chalisgaon, Manmad, Malsiras, Dhond and Chikodi.

The Chalisgaon Notified Area Committee has been replaced by a Municipality since October 1st, 1919.

113. The following statement shows the income and expenditure of the Village Sanitary Boards during the year under report :—

Statement showing, by districts, the Income and Expenditure of the Village Sanitary Boards in the Bombay Presidency during the year 1919-1920.

Districts.	Number of Village Sanitary Boards.	Names of villages.	Popular contribution	Total, including opening balance.	Total expenditure.	Closing balance.	Remarks.
			Rs.	Rs.	Rs.	Rs.	
Thana	1	Gholwad-Bordi ...	560	1,514	1,415	99	
Surat	1	Chikhli-Samroli ...	388	1,917	1,135	782	
East Khandesh ...	1	Vaghli ...	301	1,067	505	562	
Kanara	1	Kondli, Balikop, Hosur } Siddapur ..	90	507	367	140	

Part III of Act No. 1 of 1889 has recently been extended to Aundh and Bopodi villages in Haveli Taluka in the Poona District and the Village Sanitary Board is expected to commence work shortly.

114. During the year 44 Sanitary Committees were newly formed as under :—

Northern Division.—Kanjri and Napa in Kaira District. Popular contribution has been collected at Traj and the establishment of a Sanitary Committee there is under consideration. Untdi, Alipore and Degam in Surat District; new Committees have been sanctioned for the villages of Pahaj and Dehej and Kantharia in the Broach District. They have not

yet commenced work. A new Committee was also established at Vada in Thana District which has not yet begun work.

Central Division.—Kanalda, Pahur and Pimpalgaon in East Khandesh; Velapur in Sholapur District; Morgaon, Indori and Chinchwad in Poona District; Miri and Ashvi in the Ahmednagar District; Kole, Masur and Burli in Satara District. Bhilkot, Jalku, Kandhana, Gugulwadi, Astane and Zodga Sanitary Committees were newly established in Nasik District mainly for the purpose of maintaining the newly opened dispensary at Zodga.

Proclamations under section V of the Village Sanitation Act I of 1889 have been issued for the extension of part II to the villages of Pandare and Walha and Sanitary Committees will be established there shortly.

The Sanitary Committee at Bhagur was abolished from 1st April 1919.

Southern Division.—Devgad and Harnai in Ratnagiri District—Recovery of popular contribution is in progress. Hambal and Lakundi in Dharwar District; Bedag in Belgaum District.

Sind Division.—Ghulam Nabi Shah, Shadi Pali Station and Hingorno in Thar and Parkar District; Chana and Bakshapur in the Upper Sind Frontier and Daur in Nawabshah District. Sono-Jatai, Radhan village and Massedero in Larkana District. Bado in Sukkur District; Husri, Alimkhan Mari, Piaro Sund, Masu Bhurgri and Khebar in Hyderabad District. The Sanitary Committees at Mehar and Khairpur Nathan Shah in Larkana District, Kotè Sultan, Ubauro, Mirpur and Khairpur Daharki in Sukkur District and Tando-Jam in Hyderabad District were converted into Notified Area Committees. The village Belo (Karachi District) where there was a Sanitary Committee was swept away by floods last year.

Detailed information regarding the income and expenditure and the birth and death rates for the population under the administration of Sanitary Committees is given in the following tables :—

Statement showing, by districts, the Income and Expenditure of the Sanitary Committees in the Bombay Presidency during the year 1919.

Districts.	Number of Sanitary Committees.	Total income including opening balance.	Popular contributions.	Total expenditure.	Closing balance.	Remarks.
		Rs.	Rs.	Rs.	Rs.	
Ahmedabad ...	8	10,643	1,507	5,203	5,440	
Kaira	28	34,334	9,199	15,129	19,205	
Panch Mahals ...	5	11,878	2,423	7,126	4,752	
Broach	25	32,147	6,956	16,180	15,967	
Surat	19	17,691	6,420	12,823	4,868	
Thana	11	18,856	3,940	8,956	9,900	
Total, Northern Division ..	96	1,25,549	30,445	65,417	60,132	
Ahmednagar	20	23,477	5,922	13,057	10,420	
East Khandesh ...	15	46,370	10,061	28,479	17,891	
West Khandesh ...	8	18,079	2,944	7,606	10,473	
Nasik	25	30,146	4,836	11,237	18,909	
Poona	11	7,477	1,530	2,781	4,696	
Satara	20	11,329	4,885	6,200	5,129	
Sholapur ...	4	3,074	814	2,535	539	
Total, Central Division ...	103	1,39,952	30,892	71,895	68,057	
Belgaum ...	32	39,118	10,451	20,018	19,100	
Bijapur ...	13	19,542	3,576	7,773	11,769	
Dharwar ...	42	47,450	9,014	19,885	27,565	
Kolaba ...	25	9,240	1,915	3,789	5,451	
Ratnagiri ...	3	885	371	508	377	
Total, Southern Division...	115	1,16,235	25,327	51,973	64,262	There are no Sanitary Committees in the Kanara District.
Karachi ...	36	26,720	6,206	12,535	14,185	
Hyderabad ...	26	26,641	4,462	13,292	13,349	
Sukkur ...	16	11,381	3,371	7,823	3,558	
Larkana ...	49	36,330	6,954	22,404	13,926	
Nawabshah ...	27	38,727	13,550	21,048	17,679	
Thar and Parkar ...	26	31,093	6,503	15,050	16,043	
Upper Sind Frontier ...	11	13,437	2,683	9,704	3,733	
Total for Sind ...	191	1,84,329	43,729	1,01,856	82,473	
Grand Total ...	505	5,66,065	1,30,393	2,91,141	2,74,924	

Statement showing by districts combined Birth and Death rates for Sanitary Committees in the Bombay Presidency during the year 1919.

Districts.	Number of Sanitary Committees.	Ratio of Births per 1,000 of Population.	Ratio of Deaths per 1,000 of Population.						Remarks.
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.	Total excluding Plague.	
Ahmedabad ...	8	27·38	...	·04	·04	...	25·42	25·38	
Kaira ...	28	28·92	·42	·01	·02	...	24·31	24·29	
Panch Mahals ...	5	41·50	2·52	·27	...	...	36·13	36·13	
Broach ...	25	40·01	1·22	·48	·79	...	29·10	29·10	
Surat ...	19	35·90	7·06	·04	·22	·04	36·14	35·92	
Thana ...	11	20·96	6 88	·61	...	...	30·72	30·72	
Ahmednagar ...	20	27·59	6·81	·46	...	...	31·84	31·84	
East Khandesh ...	15	42·20	2·08	·18	...	...	29·31	29·31	
West do. ...	8	37·38	2·36	·92	2·27	...	34·52	32·25	
Nasik ...	25	34·33	5·72	·19	...	...	38·13	38·13	
Poona ...	11	22·80	3·26	·19	·21	...	24·02	23 81	
Satara ...	20	25·13	3·58	...	·21	...	20·30	20·09	
Sholapur ...	4	27·73	2·94	3·93	·34	...	42·75	42·41	
Belgaum ...	32	31·14	·60	·41	·02	·05	20·03	20·01	
Bijapur ...	13	27·52	·19	·06	2·46	·03	26·08	23·62	
Dharwar ...	42	32·12	·01	·11	2·16	1·00	28·18	26·02	
Kolaba ...	25	26·61	13·60	·07	·07	...	44·20	44·13	
Ratnagiri ...	3	17·29	13·85	...	...	...	43·42	43·42	
Karachi ...	36	22·58	...	·69	·07	...	23·64	23·57	
Hyderabad ...	26	23·87	...	·07	...	...	28·12	28·12	
Sukkur ...	16	34·21	·13	·73	...	...	28·54	28·54	
Larkana ...	49	27·51	·23	3·15	·03	...	28·23	28·23	
Nawabshah ...	27	26·16	·05	·32	·13	...	22·16	22·03	
Thar and Parkar ...	26	18·13	...	...	...	...	29·70	29·70	
Upper Sind Frontier ...	11	36·73	·08	1·50	...	...	35·50	35·50	

The following Sanitary Committees were visited by Deputy Sanitary Commissioners—Songir, Lasalgaon, Pimpalgaon (Baswant), Deola (Taluka Kalwan), Chandor, Satana and Malegaon Camp by the Deputy Sanitary Commissioner, Western Registration District, Natepute, by the Deputy Sanitary Commissioner, Central Registration District, Kaboor and Konoor by the Deputy Sanitary Commissioner, Southern Registration District, Matar, Traj, Chaklashi, Uttarsanda, Dabhan, Thasra, Kalsar, Karamsad, Jhadehwar, Diwa, Sajod and Honsot by the Deputy Sanitary Commissioner, Gujarat Registration District, Mirokhan, Nawabshah, Mirpur Mathelo, Hayat Pitafi, Pano Akil and Kadarpur by the Deputy Sanitary Commissioner, Sind Registration District.

The work done by the Sanitary Committees has been satisfactory. The Committees at Pahur, Holnantha, Adavad, Neri Bk., Lohara, Malegaon, Satana and Nanpur took steps for the repair and conservancy of roads. The Committees at Akola, Shevgaon and Kalwan made provision for public latrines. Dasgaon, Newasa, Miri, Kopergaon, Mamdapur and Pathardi made arrangements for providing a pure water-supply, Songir Sanitary Committee established a night-soil depôt. Pimpalgaon Baswant Committee removed cesspools and constructed a new well. Tando Adam Committee improved registration of births and deaths. Syedpur stopped burial within the limit of the village. Improvement was effected in conservancy arrangements by the Sanitary Committee at Kandhkote. Islamkote Committee constructed a bathing ghat and a landhi on the cremating ground. Slaughter-houses are proposed at Khan and Mirwah. Vaur Committee supplied medicines to the poor. The working of the Sanitary Committees at Honsot and Amod in the Broach Collectorate was reported to be efficient. The most urgent need of the Sanitary Committee at Darwesh Naich is a better drinking water-supply.

In Tergaon village in Haliyal Taluka of Kanara District the villagers are of their own accord constructing stone paved gutters.

Jungle is being cleared by the agency of the Forest Department round a number of village sites.

115. There are now 9 Sanitary Associations working in the Presidency. Government have been pleased to sanction the grant to the Karachi Health Association of half its net recurring expenditure on the maintenance of a staff of Lady Health Visitors and the cost of the work, entrusted to them, subject

to a maximum of Rs. 5,000 a year. Surat Sanitary Association gave instruction in cholera prevention by means of illustrated lectures and carried out inspection of school children. The Henderson Ophthalmic Scheme at Surat works in co-operation with this Association. About 17,000 quinodine and cinchona tablets were sold at a cheap rate by the Broach Sanitary Association during the malaria season. This Association also opened three shops at which pure milk was sold. A Public Health Exhibition was arranged with the Sanitary Conference by the Ahmedabad Sanitary Association under the auspices of the Commissioner, Northern Division, and it was attended by the Sanitary Commissioner for the Government of Bombay and the Deputy Sanitary Commissioner, Gujarat Registration District. A baby show was also organised.

The establishment of a Propaganda Bureau for the Presidency is under consideration.

116. The Religious Fairs at Vautha in Dholka Taluka of Ahmedabad District and Shukaltirth in Broach Taluka of Broach District took place during the first week of November 1919 at which 1,00,000 and 35,000 pilgrims assembled respectively. At Dakor, the chief pilgrim centre in the Gujarat Registration District, an epidemic of cholera broke out, infection spreading to Anand, Kasar, Umreth and Sureli.

In the month of July the Alandi Palkhi became infected while passing through Bhor and Phaltan States. Infection was thus carried into Pandharpur. By permanganating the water-supply at Pandharpur, the epidemic was fortunately controlled and only a few villages were infected by the outgoing pilgrims.

In the Southern Registration District three villages were invaded by Influenza as a result of importation of infection from pilgrim centres—Dharmatti of Gokak Taluka infected from Kodali in Kolhapur State, Halsangi of the Indi Taluka from Pandharpur and Hirekop of Nargund Peta also from Pandharpur. These religious fairs are receiving the full attention of the officers of the Sanitary Department and preventive measures are carried out by the Municipalities and other places where important fairs are held.

117. There are now two Laboratories in the Presidency—the Sanitary Board's Laboratory at Poona and the Public Health Laboratory, Karachi. The Poona Laboratory is in charge of Dr. J. B. Mama, D.P.H., while Dr. F. Barretto, D.P.H., is at Karachi.

In Poona three different types of water purification plant are working—rapid mechanical filters and chlorination for the Poona cantonment storage tanks and chlorination for the Poona city supply and slow sand filters and chlorination for Kirkee and Pashan supply. During the rainy season Paterson Filters are used for Kirkee. Of these three types of purification, the rapid mechanical filters proved most satisfactory. The city installation requires complete reconstruction.

The Poona Laboratory carried out daily examinations of samples from these various water works and from stand-pipes about the town. Sewage effluents from septic tanks at Hadapsar were also examined weekly; while analyses of samples of water sterilizers such as Ferrozone, etc., were made from time to time.

Dr. Mama visited Hubli water works for the inspection of Jewell Filters and carried out necessary tests at Alibag for the extension of the Narangi water works.

The establishment of a Laboratory at Ahmedabad is under consideration.

SECTION X.

118. The Deputy Sanitary Commissioners visited 703 towns and villages during the year, and furnished reports on numerous towns and villages.

Lieut.-Col. Anderson, I.M.S., was in charge of the office of the Deputy Sanitary Commissioner, Western Registration District, during the year. He visited 42 towns and villages, for public health purposes and 134 for vaccination. He also made special enquiries into the prevalence of leprosy in an area in East Khandesh District.

The Deputy Sanitary Commissioner, Central Registration District, Dr. DaGama gave advice in public health matters to 102 towns and villages and visited 36 towns for vaccination purposes. He made special investigation of cholera at Alandi and of influenza in Poona City and enquired into the cause of the high mortality at Yerandavne, Ghorpori and Bahul. He visited Pandharpur at the time of principal fairs.

Dr. Dalal, Deputy Sanitary Commissioner, Southern Registration District, held charge of the Vaccine Institute, Belgaum, in addition to his own duties during January and February. He inspected 51 towns and villages for general sanitary purposes and 48 for vaccination. He made inspection of certain areas for grazing grounds and for military purposes in Belgaum, examined pupils for quininization at Hubli and made an investigation into the outbreak of influenza at Konnur.

The Office of the Deputy Sanitary Commissioner, Gujarat Registration District, was held by Dr. Jamshyd Munsiff from 1st January to 2nd September and from 19th November to 31st December. In the intervening period he was deputed to the Sanitary Commissioner's Office for the purpose of compiling a manual of Vital Statistics and the charge of his office was held by Lieut.-Col. A. W. Tuke, I.M.S., Civil Surgeon, Ahmedabad, in addition to his own duties. The Deputy Sanitary Commissioner inspected 134 towns and villages for general sanitary purposes and 63 for inspection of vaccination.

Improvement in the registration of deaths has engaged Dr. Munsiff's attention and the method adopted by him for ensuring greater accuracy in registration has been found to work satisfactorily.

Dr. Pinto, Deputy Sanitary Commissioner, Sind Registration District, visited 32 towns for general sanitary purposes and 61 for vaccination.

The Office of the Sanitary Commissioner for the Government of Bombay was held by Lieut.-Col. F. H. G. Hutchinson, I.M.S., from 1st January to 28th February 1919 and afterwards by Lieut.-Col. W. O'S. Murphy, I.M.S. During the year under report 29 towns were visited in connection with epidemics and for general sanitary purposes. The Sanitary Commissioner visited Famine Relief Camps at Lonikand, Kondapuri, Koregaon and Uruli and a Poor House at Chembur. He inspected water-supplies at Satara, Saswad, Belgaum, Dharwar, Hubli, Nasik, Malegaon and Dhulia; sites for St. Andrew's school at Bandra, and for a Jail at Kurla; and enquired into cholera outbreaks at Chembur Poor-house, Broach, Godhra and Bhosari. He was present at the meeting of the Committee appointed to consider the question of improving water-supplies on Railways held in January, and attended the Sanitary Conference held at Simla in May. He carried out a malaria investigation at Lonavla and inspected irrigation around Sholapur and the sanitary arrangements at Pandharpur at the time of the Ashadi Fair. He also attended the Health Exhibition held under the Sanitary Association, Ahmedabad, in December 1919.

H. MELHUISH,
Lieut.-Col., I.M.S.,
Acting Sanitary Commissioner.

Poona, 6th August 1920.

APPENDIX I.

ANNUAL REPORT OF THE SANITARY BOARD, BOMBAY PRESIDENCY, FOR THE YEAR 1919.

During the year under report there was no change in the constitution of the Board, though there were many changes of officers.

2. Four regular meetings and one special meeting of the Board were held and the following important subjects were dealt with :—

(1) Financial position of the Sukkur Municipality.

(2) Question of making grants to rural areas.

(3) Question of the appointment of a salaried Secretary to the Board.

(4) Financial position of the Hyderabad Municipality.

3. The amount of one lakh placed at the disposal of the Sanitary Board, *vide* Government Order, General Department, No. 3494 of 28th April 1919, was distributed for minor sanitary schemes throughout the Presidency according to the merits of each individual case.

Numerous applications for grant were received, out of which plans and estimates for 50 schemes amounting to Rs. 2,06,234 were approved and sanctioned by the Board. Grants were allotted to 40 schemes in the Presidency including Sind as per distribution below :—

	Rs.
Sind	43,571
Northern Division	14,000
Central Division	13,557
Southern Division	22,922
Total ...	94,050

A balance of Rs. 5,950 was surrendered.

4. The following schemes were placed before the Board for sanction to the preparation of plans and estimates and approval to the same was given to all except item 3 :—

1. Málegaon Water Supply.
2. Haliyál Water Supply.
3. Kurla Drainage.
4. Jacobabad Water Supply.
5. Kapadvanj Water Supply.

The sanction to the preparation of a scheme for the Kurla Drainage has been deferred until the question whether Kurla is to be included in the Bombay Municipal area or not is decided.

5. The following amounts were sanctioned by Government as grant-in-aid to certain Municipalities in the Presidency under the head 24-B Sanitation :—

	Rs.
1. Poona City in connection with water supply and Drainage Works	36,041
2. Bombay Municipality for water supply to Sálsette from Pawai Lake	25,000
3. Improvements to water supply at Junnar ...	1,000
4. Sanitary improvement to Dhond Notified Area ...	4,040
5. Bársi water supply	25,000
@	91,081

The following sums were also sanctioned as detailed below :—

(1) Trial surveys and preliminary investigations of sanitary projects	12,200
(2) Purchase of steel boring pipes for sub-artesian water supply	2,03,234

6. The following construction works in connection with water supplies were completed or in progress :—

Sind.

Karáchi.—About 110 lengths of 30" internal diameter reinforced concrete pipes and collars were made in addition to 234 pipes and 236 collars made in the year 1918. Out of these, 46 lengths of pipes for the new underground conduit were laid and 1,480 feet of dry stone gallery was constructed into the catchment area of Malir River. Similar dry

stone gallery of 190 feet was constructed at No. 5 well Dumlotte. Expenditure to end of December 1919, Rs. 1,92,858.

Hyderabad.—The work of converting the ground round the Shah Kadam Tank into a garden and constructing mális' quarters has been completed. After acquiring the necessary land the work of constructing two new settling tanks at Gidu and providing outlet conduit for them is in progress. Expenditure Rs. 20,537.

Northern Division.

Ahmedabad.—About 338 feet of central collecting main was laid up to chainage 1,190 with a branch line to supply well No. 6. Supply wells Nos. 4, 5, 6, 7 were lowered to the required extent and connected up to central collecting main. The steinings of all supply wells were raised to the required extent. A pipe line of 7″ diameter to a length of 3,146 feet was laid during the year. Expenditure Rs. 28,172.

Khárághoda.—The work of laying earthenware pipe of 6″ diameter and the partial construction of three cisterns each of about 10,000-gallon capacity for supplying water from Motsari Bore water for domestic purposes to the people working at new Agar was completed. Expenditure Rs. 28,178.

Uran.—As the Kharapat villages were threatened with water famine about 2½ miles of 3″ and 4″ piping were purchased under the orders of Government and given on loan to the Chairman, Water Works Committee, Uran. Expenditure Rs. 36,119.

Central Division.

Poona.—The Poona City Water Supply was maintained and chlorinated during the year. Expenditure Rs. 42,265.

Kirkee.—The emergency water supply scheme for the Military stationed there, which provides for pumping up the supply from the Mula River and sterilizing it by means of a Rapid Filter Plant, was completed and brought into operation during the year. Expenditure Rs. 1,40,147.

Sholápur.—The works carried out in connection with the water works were:—(1) laying a scour valve pipe from the tank to the nearest nálla; (2) a gallery to the tower in the Ekruk Tank; and (3) construction of Engine house in connection with the workshop. Expenditure Rs. 8,498.

Extensions to the distribution system were made at a cost of Rs. 31,000.

Bársi.—1,600 feet of 10″ gravitation main was laid and the construction of chambers for valves on mains already laid was completed. About 4,000 R. ft. of the distribution system consisting of 6″, 5″, 4″ and 3″ pipes were laid in different localities in the town. Expenditure Rs. 16,186.

Ahmednagar.—The principal items of works that were in progress during the year were as under:—

(1) Earthen dam where the filling in of the gorge was taken up and brought up to 17 feet above ground; (2) a bridge was provided from the dam to the outlet valve tower; (3) the remaining length of the flank wall of waste weir was built up; (4) pipes for the gravitation main commenced to arrive at the end of the year. The excavation of trenches for the main was nearly completed for a length of about 9,000 feet; (5) about 4,400 feet of distribution pipes were laid. Expenditure Rs. 1,54,358.

Southern Division.

Dhárwár.—The works of catching leakage and percolation water of the Kelgeri Tank and diverting leakage water along the toe of dam to a gathering trench were in progress. Expenditure Rs. 2,851.

Bijápur.—Distribution mains were extended in portions of the town. Expenditure Rs. 2,835.

7. The following drainage works were either in progress or completed:—

Sind.

Karáchi.—The work of laying gravitating sewers in Moosa lines, Lyari quarters to No. 6 Ejector Station with cement block manholes was completed. Expenditure Rs. 4,449.

Hyderabad.—Hirabad surface drainage scheme was completed during the year and other minor drains were constructed. Expenditure Rs. 15,426.

Central Division.

Poona.—A feed water tank was constructed at the Central Pumping Station and repairs carried out to the pumping machinery. Expenditure Rs. 19,387. The effluent main was kept under observation throughout the year. The main was tapped in places to remove air locks and tested to ascertain its discharging capacity and was found to be in full working order. The revision of the whole Poona City Drainage Project is to be undertaken by a Special Engineer who is to be appointed shortly. Expenditure Rs. 42,265.

Alandi.—Bhágirathi Nálla drain was extended at its head by a length of 20 feet of cement concrete. The work was completed and handed over to the Municipality. Total cost of the work was Rs. 15,794.

Dhond.—Pucca sullage drains are being provided on one side of the bazar road and the cross road which meet together. Expenditure Rs. 4,415.

8. Eighty schemes were under investigation by the Sanitary Engineer including minor sanitary schemes, of which 38 were being investigated by the Executive Engineer, Southern Sanitary District, and 34 by the Executive Engineer, Northern Sanitary District, and eight by the Sub-Divisional Officer, Sind Sanitary Sub-Division.

9. Boring operations for artesian water supplies were in progress at Kaira, Dholera, Bávla and Nadiád.

Kaira.—The 6″ lining pipe was carried down from 813 feet (the depth at the end of last year) to 830 feet, after which as it could not be driven further, 4½″ piping was used and the depth reached was 1,000 feet. A small flow of 7 gallons per minute was tapped at a depth from 933 to 963 feet.

Dholera.—The 10″ lining pipe was continued down to a depth of 845 feet and as it could not go down further, 8″ lining was used which has gone to a depth of 980 feet. At the depth of 830 feet a large supply was met with which increased as the boring progressed until it amounted to 542 gallons per minute with a temperature of 114°. As the water is of a brackish taste, efforts are continued to obtain potable supply at a greater depth.

Bávla.—8″ piping was used and the bore taken to a depth of 587 feet, and as it could not be driven further, it is proposed to continue the boring with 6″ pipe. Sweet water stands in the bore hole at a depth of 18 feet below ground level.

Nadiád.—The boring has reached the depth of 436 feet, using 10″ pipe, but great difficulty was experienced as a large quantity of kankar sand and gravel was rushing from below into the pipe. Work is in progress.

Wádhwan.—A boring machine has been given on loan to the State. The bore has reached to a depth of 110 feet.

Boring at the following places were put down to ascertain the possibilities of water supplies or to test for foundations :—

Ránebennur near Huletti on Hirekari Nálla.—To test subsoil water conditions.

Jalgaon.—Near the Municipal pumping plant below Mehrun Tank to investigate subsoil water conditions.

Sholápur.—At Lamboti to ascertain foundations for a bridge.

Poona.—To ascertain foundations for a bridge over the Mutha between Bhámburda and Shanwár Wáda.

Vir.—In connection with the proposed dam.

10. The staff under the Sanitary Engineer to Government remained on a reduced basis owing to the war. With the cessation of hostilities it is hoped that materials will again be available so that some of the long deferred schemes which are ready and waiting to be carried out may be taken in hand. In order, however, to avoid excesses it will be necessary to revise the rates very carefully before a scheme can be started, as the same, it is feared, will never fall to the pre-war scale.

P. N. NATESHAIYER,

Acting Secretary, Sanitary Board, Bombay Presidency.

APPENDIX II (*a*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31ST DECEMBER 1919.

I.—SUMMARY.

The following summary shows the inspection and disinfection work done in the Port of Bombay in connection with out-going and in-coming vessels as well as those lying in the harbour and docks during the year ending 31st December 1919.

One thousand three hundred and forty-eight vessels of all sorts with 430,786 crew and passengers were examined as against 1,268 vessels with 477,443 crew and passengers during the preceding year. Troops are included amongst passengers, which accounts for the large numbers. The troops were examined by the Military Embarkation Medical Staff.

The clothing, bedding and other articles of 125,649 members of crew and passengers of out-going and in-coming vessels and of members of crews of vessels lying in the port were disinfected. Of these, 99,181 were Asiatic and African members of crews, third class or deck European and Indian passengers and pilgrims who left the Port of Bombay for ports out of India and 26,468 were members of crews, troops and passengers who arrived by vessels on which cases of infectious diseases had occurred during the voyage or while in the port. In addition to the abovementioned numbers 2,187 baggage coolies and stevedores' men were disinfected in order to enable certain vessels to work cargo for a few hours after medical inspection and disinfection of their crews and passengers.

One hundred and seventy-six vessels on which cases of infectious diseases had occurred were disinfected and 9 vessels which carried pilgrims to Jeddah were thoroughly cleansed and freed from rats by means of sulphur dioxide gas generated in a Clayton apparatus. Besides the 9 out-going pilgrim ships 20 in-coming and 32 out-going vessels were fumigated. In addition to this number 21 vessels (mostly transports) were fumigated by the British India Steam Navigation Company's apparatus. One hundred and eight persons who had been in contact with smallpox were vaccinated. In addition to this number 9,001 out-going pilgrims were vaccinated by a special vaccinating staff lent by the Municipality under the direction of the Police Commissioner. Inoculation was offered to the members of crews of plague-infected vessels but none were willing to undergo it.

II.—OUT-GOING VESSELS.

2. In accordance with Government Notification, General Department, No. 1713, dated the 15th March 1917, the medical examination of all vessels, crews and passengers, proceeding to ports out of India, and the disinfection of the clothing and bedding of all Asiatic and African members of crews, of all passengers travelling third class who were not provided with berth accommodation, of fourth class and deck passengers and of all Asiatic and African servants who sailed on such vessels were carried out before they left the Port of Bombay.

3. One thousand and sixty-four outward bound vessels with 121,007 crew and 239,282 passengers (including troops) or a total of 360,289 persons were inspected an against 1,042 vessels with 111,538 crew and 301,934 passengers or a total of 413,472 persons during the preceding year. The inspection of the troops was carried out by the Military Embarkation Medical Staff.

4. The bedding, boxes and suspected articles of clothing, etc., of 73,140 Asiatic and African members of crews and 26,041 third class, fourth class and deck passengers and pilgrims who sailed on steamers bound for ports out of India were disinfected.

5. Fifty-four vessels while in the docks failed to observe the rules laid down by Government which are aimed at preventing rats obtaining access to vessels. Paragraph 2 of the Plague Certificates attached to their Bills of Health (which certifies that the precautions prescribed for adoption in the Port of Bombay to prevent the ingress of rats into ships have been duly observed) was accordingly deleted at the time of departure.

6. A few vessels had cases of infectious diseases among the crews and passengers within 12 days or, in the case of plague and cholera, 7 days prior to their departure from this port. The Bills of Health granted to these mentioned the diseases which had occurred on board as well as the measures which had been taken before their departure for the prevention of the spread of infection on board or its introduction at other ports.

7. Special reports have been submitted to Government about outbreaks of plague on the S.S. "City of Sparta," "Nankin" and "Moora," on board of all of which plague made its appearance in the Mediterranean Sea. A remarkable outbreak of rat plague was discovered on board the S.S. "Malta" on her arrival in March at Bombay from New Zealand, Australia and Colombo.

III.—IN-COMING VESSELS.

8. In accordance with the rules prescribed under Government Notification, General Department, No. 1713, dated the 15th March 1917, medical inspection and disinfection

of vessels which were actually infected or suspected to be infected were carried out. All pilgrim ships and all vessels which arrived from East African Ports were also inspected on arrival.

9. One hundred and fifty-eight in-coming vessels of various kinds with crews aggregating 18,345 persons and 49,714 passengers (including troops) were inspected during the year. Of the 158 vessels 50 were found to have had cases of infectious diseases on board at the time of arrival or during the voyage. Thirty-four were Hospital Ships and Hired Transports from Aden and Persian Gulf ports (with 4,567 crew and 12,294 troops), among whom 7 cases of plague, 2 cases of cholera, 13 cases of smallpox, 4 cases of measles, 18 cases of chickenpox, and 6 cases of typhus had occurred. These cases were mostly confined to troops and were disposed of by the Military Authorities on landing in Bombay. Three were ordinary vessels and 1 a Hospital Ship from East African Ports with 535 crew and 1,627 passengers and troops, among whom 1 case of measles, 2 cases of jigger and 2 cases of influenzal pneumonia had occurred. The jigger patients were removed to the Arthur Road Hospital. The ships and the clothing and bedding of their crews were disinfected. The remaining 12 vessels arrived from other ports with 1,657 crew and 3,350 passengers, among whom 3 cases of plague, 6 cases of smallpox, 1 case of measles and 8 cases of chickenpox had occurred. The vessels and the clothing and bedding of the crews and passengers were disinfected.

IV.—Infectious Diseases on Vessels arriving and departing and in the Harbour and Docks.

10. Tabular statement No. 1 gives the number of cases of infectious diseases which occurred on vessels arriving, departing and in the harbour.

It will be seen that 71 cases occurred on vessels arriving as follows :—11 cases of plague, 2 cases of cholera, 19 cases of smallpox, 6 cases of measles, 26 cases of chickenpox, 2 cases of jigger and 6 cases of typhus. One case of chickenpox was detected among crews and passengers of departing vessels at inspection in Bombay. Four cases of smallpox and 1 case of measles were reported to have occurred on vessels after departure.

In addition to the above, 6 cases of plague, 111 cases of cholera, 15 cases of smallpox, 5 cases of measles and 6 cases of chickenpox occurred on vessels and sailing craft in the harbour and docks. Almost all the cases of cholera proved fatal and they occurred on sailing craft at the time of the terrible epidemic of cholera in Bombay in the months of January and February. One of the six cases of plague was a European storekeeper on the H. T. "Huntscastle" on which a serious outbreak of rat plague occurred after the ship had been in Bombay docks for some time. The rats were first noticed to be dying in the food store-room in which the storekeeper was working. The ship was thoroughly deratised by claytonization and a large number of infected rats were destroyed.

11. Tabular statement No. 2 gives separately details of infectious diseases on vessels in the harbour and docks. The clothing and bedding of the crews of these vessels aggregating 2,438 persons were disinfected. All these vessels were disinfected. The vessels on which plague cases had occurred were also fumigated.

V.—Disinfection and Fumigation of Ships.

12. During the year under report 176 vessels of all sorts were disinfected and fumigated.

13. Of the 176 vessels referred to in the foregoing paragraph, the fumigation of 61 vessels including 9 outward pilgrim ships was carried out by means of the Clayton process under the direction of the Port Health Officer. In addition to these the British India Steam Navigation Company fumigated 21 steamers by their own apparatus. This number is not included in tabular statement No. 1.

14. The Port Disinfection Station received every Monday clothing and bedding from various hospitals for disinfection. Four hundred and ten bundles containing clothing and bedding of this kind were disinfected as against 382 during the previous year. The clothing of 2,187 baggage coolies to work cargo on outward bound vessels after the disinfection of their crew or after obtaining Bills of Health was disinfected at the request of their Commanders and Agents.

VI.—General Health of the Shipping.

15. During the year under report 1,410 persons connected with the shipping were admitted into the various hospitals in the City. St. George's Hospital admitted 591 European patients, of whom 17 died, 551 were discharged cured and 23 remained under treatment after the 31st December 1919. The Jamsetji Jijibhoy Hospital admitted 205 Asiatic patients, of whom 31 died; the Gokuldas Tejpal Hospital admitted 462 Asiatics, of whom 65 died; and the Arthur Road and the Maratha Hospitals admitted 152 patients including troops, of whom 17 died and 135 were discharged cured.

16. No deaths occurred in connection with the cleansing of bilges of ships during the year. There were 323 accidents on board of vessels which were lying in the harbour or docks. Of these, 37 proved fatal.

VII.—Red Sea Pilgrim Traffic.

A.—Outward Pilgrim Traffic.

17. In accordance with the Government of India's Notification, Home Department (Sanitary), No. 1606, dated the 13th July 1908, and Government Resolution, General Department, No. 4361, dated the 18th August 1909, and Government of India's Notification, Department of Education (Sanitary), No. 635, dated Simla, the 24th April 1912, reproduced in Bombay Government Notification, General Department, No. 2759, dated the 30th April 1912, the Port of Bombay was open for the embarkation of Muhammadans going on pilgrimage to Mecca via Jeddah. Before the pilgrims embarked at Bombay the ships were thoroughly cleansed and freed from rats by means of the Clayton process The pilgrims were medically inspected and their clothing and bedding disinfected before they were allowed to embark.

18. The names of the ships, the numbers of pilgrims carried by them and the date on which they left Bombay for Jeddah are given below :—

No.	Name of Vessel.	Number of Pilgrims sailed.	Date of Departure.
1	S.S. "Akbar"	876	17th May.
2	S.S. "Shustar"	841	5th June.
3	S.S. "Khosrou"	521	20th June.
4	S.S. "Akbar"	1,193	11th July.
5	S.S. "Hejaz"	936	18th July.
6	S.S. "Zayani"	1,096	1st August.
7	S.S. "Iran"	942	9th August.
8	S.S. "Sofala"	1,700	12th August.
9	S.S. "Akbar"	1,113	16th August.
	Total ...	9,218	

19. It will be seen that 9,218 pilgrims left during the season as against 1,361 in the previous year.

20. The classification of pilgrims is as follows :—

481	Bombay Presidency (including Sind).
327	Bombay City.
238	Madras Presidency.
2,808	Bengal.
320	Assam.
752	United Provinces.
776	Punjab and North-West Frontier.
47	Rajputana.
95	Central Provinces.
105	Bihar and Orissa.
11	Burmah.
5,960	

3	Ceylon.
630	Native States.
794	British Java.
382	Dutch Java.
855	Persia.
304	Arabia.
64	Mesopotamia.
53	Russia.
23	China.
14	Afghanistan.
7	Nepal.
123	Muscat.
2	Zanzibar.
2	Tibet.
2	Africa.
3,258	

Total ... 9,218

21. Nine thousand and one out-going pilgrims were vaccinated before starting by a special staff placed under the Police Commissioner by the Municipality. Besides these some pilgrims from other provinces and Native States had been vaccinated before leaving their homes for Bombay.

22. The Pilgrim Observation Camp at Perim and Quarantine Camp at Camaran were opened during the pilgrim season under report. The necessary Medical, Mechanical and other staffs required for these camps were provided by the Surgeon-General with the Government of Bombay and they were despatched to Perim and Camaran by the first two pilgrim ships which left Bombay for Jeddah on 17th May and 19th June 1919.

B.—Inward Pilgrim Traffic.

23. During the year under report 9,100 pilgrims arrived from Jeddah in 11 vessels as tabulated in statement No. 3 which is appended to this report.

24. Fifty-seven deaths occurred at sea among the returning pilgrims. They were reported to be due to heat stroke, old age, general debility, diarrhœa, dysentery pneumonia and phthisis.

25. None of the pilgrim ships had any cases of infectious diseases during the voyage or on arrival at Bombay.

VIII.—Sanitary State of the Harbour and Foreshore.

26. The sanitary state of the harbour and of the various bandars, basins and docks was fair.

IX.—Cholera, Smallpox and Plague in the City of Bombay.

27. During the year under report 8,455 deaths from cholera, 780 deaths from smallpox and 702 deaths from plague occurred in the City of Bombay as against 1,661 from cholera, 1,024 from smallpox and 1,143 from plague during the preceding year.

The disease "Influenzal pneumonia" has recently been declared as an infectious disease under the Epidemic Diseases Act in order to enable the Port Health Officer to deal with ships infected by it.

X.—General.

28. During the year only eight plague-infected rats were found by the Port Trust staff in the Alexandra Dock. None were found in Prince's and Victoria Docks. This is in marked contrast to the number found last year, viz., one hundred and thirteen. It is interesting to observe that in both years all the plague-infected rats were found in the Alexandra Dock.

29. The undersigned was in charge of the Port Health Department throughout the year under report.

30. The permanent Lady Doctor, Mrs. S. Harrison, was absent on sick furlough from the afternoon of 17th June 1919 to the end of the year, during which period Miss J. B. Engineer, who is still in the appointment, acted for her.

31. The members of the Medical, Clerical and Sanitary Police staffs performed their duties satisfactorily.

32. The services of a Commissioned Medical Officer and a Lady Doctor had to be engaged on a few occasions when work was heavy.

W. M. HOUSTON, M.B., D.P.H.,
Lieut.-Colonel, I. M. S.,
Health Officer of the Port.

Bombay Port Health Office,
New Customs House,
dated 31st March 1920.

TABLE No. 1.

The following tabular statement gives a summary of the shipping of the Bombay Port and the work done in connection therewith for the year ending 31st December 1919:—

Vessels including country craft.	Number of Vessels inspected.	Number of persons inspected including troops.	Number of Asiatic crews and 3rd class deck passengers disinfected.	Number of Vessels.		Number of persons vaccinated.	Diseases and cases of each.						
				Disinfected.	Fumigated.		Plague.	Cholera.	Smallpox.	Measles.	Chickenpox.	Jigger.	Typhus.
Entered	158	68,059	24,030	50	20	108	11	2	19	6	26	2	6
Left	1,064	360,289	99,181	...	41	9,001	...	...	4	1	1	...	...
In Harbour during the year ...	126	2,438	2,438	126	...	...	6	111	15	5	6	...	...
Total ...	1,348	430,786	125,649	176	61	9,109	17	113	38	12	33	2	6
	1,268	477,443	106,492	88	34	1,852	14	21	67	17	15	3	...

TABLE No. 2.

The following table includes all steam ships, square-rigged vessels and native sailing craft which became infected while lying in the Port of Bombay during the year 1919 :—

Month.	Number of persons who were infected with infectious diseases in the Docks and bandars.		Total number of infected vessels.	Total number of infectious diseases in the Bombay Harbour.							Number of crews disinfected.
	Plague.	Cholera.		Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Typhus.	Scarlet fever.	
1919.											
January ...	...	1	49	...	53	3	...	1	...	...	367
February ...	...	...	40	...	39	1	...	...	...	...	326
March ...	...	...	6	2	...	1	2	2	...	...	450
April ...	...	1	7	...	3	5	1	...	...	...	463
May ...	...	...	4	...	1	1	...	1	...	...	138
June ...	...	...	1	...	1	...	...	...	...	...	253
July ...	...	...	10	3	6	3	...	2	...	...	150
August ...	...	...	3	...	3	...	...	...	...	...	28
September ...	...	...	2	...	2	...	...	...	...	...	50
October ...	...	...	...	...	...	...	...	...	...	...	...
November ...	...	...	4	...	1	1	2	...	...	...	213
December ...	...	...	...	...	...	...	...	...	...	...	...
	...	2	126	5	109	15	5	6	...	...	2,438

TABLE No. 3.

Statement showing the number of pilgrims who returned to Bombay from Mecca by vessels during the year 1919.

No.	Name of ship.	Date of arrival.	Number of crews inspected.	Number of pilgrims inspected.	Number of deaths during voyage.	Number of cases of infectious diseases on board.		Remarks.
						On arrival.	During voyage.	
		1919.						
1	S.S. "Akbar" ...	27th September ...	121	1,235	5	...	...	
2	S.S. "Hejaz" ...	1st October ...	98	846	3	...	...	
3	S.S. "Shustar" ...	3rd do. ...	92	843	8	...	...	
4	S.S. "Nairung" ...	5th do. ...	106	667	5	...	...	
5	S.S. "Khosrou" ...	5th do. ...	112	985	2	...	...	
6	S.S. "Zayani" ...	12th November ...	96	1,203	12	...	...	
7	S.S. "Akbar" ...	18th do. ...	123	1,590	7	...	...	
8	S.S. "Shustar" ...	21st do. ...	91	490	6	...	...	
9	S.S. "Nairung" ...	9th December ...	123	154	1	...	...	
10	S.S. "Hejaz" ...	17th do. ...	99	343	4	...	...	
11	S.S. "Khosrou" ...	24th do. ...	108	744	4	...	...	
			1,169	9,100	57	...	...	

APPENDIX II (*b*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF KARACHI FOR THE YEAR ENDING 31ST DECEMBER 1919.

I.—OUTGOING VESSELS.

During the year under report 358 steam vessels outward bound for ports out of India were medically inspected and given Bills of Health by the Health Officer of the Port.

Of this number 101 vessels were proceeding to Aden, the Red Sea and Europe, and 257 to other ports out of India including the Persian Gulf.

Bills of Health were also granted after inspection to 672 country boats.

The Indian crews and deck passengers of all steamers and country craft proceeding to Ports out of India were medically inspected and their clothing, bedding and other articles disinfected at the Port Disinfecting Station, Kiamari, prior to their departure from the Port of Karachi in accordance with the Rules issued by Government.

II.—INCOMING VESSELS.

During the year under report 49 vessels which arrived in quarantine were inspected or the existence of infectious disease.

Of these 49 vessels 1 arrived from East African Ports, 4 from Jeddah *viâ* Aden, and the remaining 44 sailed from various other ports.

Five country boats (4 from East African Ports and 1 from Siriganda in Sind) also arrived in quarantine, and were duly inspected on arrival.

III.—SYNOPSIS OF INSPECTION AND DISINFECTION PERFORMED.

The following tabular statement shows the number of vessels, crews and passengers inspected during the year under report.

	Vessels.			Crews and Passengers.		
	Steamers.	Country boats.	Total.	Steamers.	Country boats.	Total.
Incoming	49	5	54	12,585	84	12,669
Outgoing	358	672	1,030	103,784	9,574	113,358
					Total ...	126,027

Of these 126,027 persons (crews and passengers) who were medically inspected on their arrival at, or departure from, the Port of Karachi, 43,707 persons (crews and passengers) also had their clothing, bedding and other articles disinfected.

IV.—MISCELLANEOUS DISINFECTION.

On several occasions during the year the clothing and bedding of patients suffering from infectious disease, as well as the clothing and bedding of contacts, were received for disinfection from the Epidemic Diseases Hospital, the Civil Hospital and other Institutions in Karachi, also from private individuals, and were duly disinfected by saturated steam under pressure in the Equifex stoves of the Port Disinfecting Station, Kiamari.

The following articles which were sent for disinfection from Hospital Ships, Ambulance Transports, and the Military Clothing Depôt, Karachi, as well as from the Lady Dufferin Hospital and the Epidemic Diseases Hospital, Karachi, and the Health Officer of the Karachi Municipality, during the year under report, were also duly disinfected at the Port Disinfecting Station, *viz.*, 7,036 blankets, 1,431 mattresses, 1,518 pillows and pillow cases, 476 trousers, 142 coats, 2,973 shirts, 292 pyjamas, 750 sheets, 791 jerseys, 1,348 mosquito nets, 100 beddings, and 1,013 bundles of clothing.

V.—PLAGUE.

During the year under report the Hired Transport "Barpeta" arrived from Basra with a case of plague among the Indian troops on board. The patient, contacts and troops on board having been taken charge of by the Military Authorities, the crew's kit (clothing, bedding, etc.) was disinfected at the Port Disinfecting Station, the ship itself was fumigated by means of the Clayton Apparatus, and the ship's officers and crew were placed under surveillance for a period of five days from the date of the occurrence of the case of plague. No further cases of plague occurred.

The ambulance transport "Varela", which called at this Port *en route* to Bombay from Basra, reported the occurrence of two deaths from plague among the troops on board during the voyage. The necessary precautionary measures were duly carried out, and no further cases or deaths occurred on board.

The S. S. "Dumra", which called at Karachi *en route* from Persian Gulf Ports to Bombay, reported that three cases of plague had occurred during the voyage, *viz.*, two cases among the Indian troops on board and one among the Indian crew—these three cases having been landed at Basra, Bushire and Henjam, respectively. The ship had been fumigated and the crew's kit disinfected at Basra after the occurrence of the first case. On arrival at Karachi, the ship's crew and passengers were all medically inspected and found to be free from plague or any other dangerous infectious disease; no rat-mortality or sickness on board was observed, and no further cases occurred.

VI.—Cholera.

One death from cholera and one case occurred among the Indian crew of the S. S. "Barjora" in the harbour. The patient was removed to the Epidemic Diseases Hospital, and the necessary precautionary measures duly taken on board, after which no further cases of this disease occurred among the crew or passengers of the vessel in question.

VII.—Small-Pox.

Two cases of small-pox occurred—one among the troops on board an Ambulance Transport and the other among the Indian crew of the S. S. "Lhasa". The necessary measures (removal of the patients to hospital, vaccination, disinfection, etc.) were duly carried out, and no further cases occurred on board the vessels concerned.

VIII.—Chicken-Pox.

Four cases were removed to hospital from three in-coming vessels, *viz.*, one from the H. T. "Franz Ferdinand", one from the H. T. "Shuja" and two from the P. S. S. "Braunfels". The usual precautionary measures (disinfection of kit and quarters, etc.) were carried out on board the vessels concerned, and the last-named vessel was also claytonised at the special request of the Military Authorities.

IX.—Measles.

Two cases occurred during the year, *viz.*, one among the Indian crew of the H. T. "Palamcotta" and one among the passengers of a country boat. The usual measures (removal of the patients to hospital, disinfection of kit and quarters, etc.) were carried out in due course, and no further cases occurred.

X.—Parotitis (Mumps).

Nine cases (*viz.*, eight from the H. T. "Tobolsk" and one from the H. T. "Ekma") were removed for treatment to the Epidemic Diseases Hospital, Karachi, and the necessary precautionary measures taken on board. All the patients were Indian members of the crews.

XI.—Yellow Fever.

No cases arrived at this port during the year.

XII.—Jigger.

No cases of this disease were reported or detected during the year.

XIII.—Sleeping-Sickness.

No cases of this disease were reported or detected during the year.

XIV.—Cerebro Spinal Fever.

During the year under report three cases (*viz.*, one case from each of the Hired Transports Barpeta, Palamcotta, and Kara Denez) were removed for treatment to the Civil Hospital, and the necessary precautionary measures were duly carried out on board the vessels concerned. All the cases occurred among the Indian crews of the above-mentioned vessels.

XV.—Influenza.

During the year, eighty-nine cases of Influenza on board ship in the Port were reported to, or found on medical inspection by, the Port Health Department. Of this number 87 cases were sent to hospital, and 2 cases received treatment on board.

XVI.—Non-notifiable Diseases.

During the year under report 20 cases of illness of all sorts (*e. g.*, malarial fever, pneumonia, dysentery, etc.) were detected in the course of the usual medical inspection of crews and passengers before embarkation, and were duly sent for treatment to the Civil Hospital.

XVII.—Deaths from Non-notifiable Diseases.

During the year, thirteen deaths from various causes (*e. g.*, heart disease, typhoid fever, phthisis, malaria, etc.) were reported as having occurred on board of vessels either in Karachi harbour or during the voyage to Karachi.

XVIII.—Emigrants.

During the year under report one hundred and fifty-two emigrants proceeding to Mombassa (East Africa) *viâ* Bombay were medically examined by the Health Officer of the Port in his capacity as Medical Inspector of Emigrants, and given certificates that they were in a fit state of health to undertake the voyage to East Africa as required in section 65 (1) of the Indian Emigration Act of 1908.

XIX.—Red Sea Pilgrim Traffic.

A.—*Outward Pilgrim Traffic.*

After being in abeyance since 1915, owing to the exigencies of the war, the sailing of pilgrims to the Hedjaz from the Port of Karachi was resumed in accordance with the instructions of Government, and four ships carrying 2,903 pilgrims, who embarked at Karachi, sailed hence for Jeddah *viâ* Aden during the Haj Season of 1919.

Immediately before their embarkation the pilgrims were medically inspected, and their clothing, bedding, etc., disinfected, at the Port Disinfecting Station, Kiamari, and the ships in which the pilgrims embarked were thoroughly cleansed and freed from rats by means of the Clayton process.

The names of the ships, the number of the pilgrims carried by them, and the dates on which they sailed from Karachi to Jeddah, are given below in tabular form.

No.	Name of vessel.	Number of pilgrims.	Date of departure.
1	S. S. "Khosrou"	346	23rd June 1919.
2	S. S. "Shushtar"	790	14th July 1919.
3	S. S. "Khosrou"	930	5th August 1919.
4	S. S. "Chakla"	837	15th August 1919
	Total ...	2,903	

B.—*Inward Pilgrim Traffic.*

The following table shows the numbers of pilgrims who returned to Karachi from Jeddah *viâ* Aden, the names of the ships in which they travelled, and other particulars.

No.	Name of vessel.	Date of arrival.	No. of crew.	No. of pilgrims for Karachi.	No. of pilgrims for Bombay.	No. of deaths from Jeddah to Aden.	No. of deaths from Aden to Karachi.
1	"Nurani" ...	29th September 1919.	99	847	*Nil.*	*Nil.*	3
2	"Shushtar" ...	18th November 1919.	92	442	563	3	3
3	"Nairung" ...	7th December 1919.	123	610	167	1	*Nil.*
4	"Hejaz" ...	14th December 1919.	99	670	335	1	3
	Total ...	.....	413	2,569	1,065	5	9

In all 2,569 pilgrims landed at Karachi, while 1,065 pilgrims who were bound for Bombay proceeded to that port in the above-mentioned vessels without landing in Karachi.

The general condition of the pilgrims and the pilgrim-ships was satisfactory.

The fourteen deaths reported as having occurred on board the pilgrim-ships during their voyage from Jeddah to Karachi (*viâ* Aden) were due to old age, general debility, phthisis, diarrhœa, etc., and not to any infectious disease.

XX.—Clayton Apparatus.

During the year under report twenty-eight vessels were claytonised (fumigated) by means of the Clayton Apparatus before sailing for ports out of India.

XXI.—Sanitary State of the Harbour.

The sanitary state of the harbour was satisfactory.

XXII.—Port Health Establishment.

The following list shows the names of the Medical Staff who did duty under the Health Officer of the Port during the year:—

Names.	Period of service.		
	Y.	M.	D.
Aasistant Surgeon B. F. Khambatta, M.B., B.S.	1	0	0
Sub-Assistant Surgeon Baharsing Toursing Advani	1	0	0
Mrs. Lake, Lady Nurse	1	0	0

The above-mentioned Medical Staff performed their duties satisfactorily.

The Clerk, Mr. Mahomed Jaffer Sheikh Ibrahim, also performed his duties satisfactorily.

The office peons and the members of the Steam Launch, Disinfecting Station and Clayton Apparatus Establishments worked satisfactorily.

H. CAREY VENIS,
L.R.C.P., L.R.C.S., D.P.H.,
Health Officer of the Port of Karachi.

Port Health Office,
Kiamari, Karachi, dated 20th February 1920.

APPENDIX II (c).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF ADEN FOR THE YEAR 1919.

I.—General Remarks.

One thousand one hundred and thirty-eight vessels and rigged vessels were granted bills of health during the year.

Of the above number 849 were sailing under the British flag and 289 under Foreign flags.

Bills of health issued to vessels having had cases of infectious diseases on board were annotated according to the circumstances of each case.

Seven hundred and nine bills of health were granted to dhows during the year.

The accompanying table A gives a list of vessels on board of which infectious diseases existed on arrival. In the case of these vessels all sanitary precautions were taken to prevent the spread of the disease.

The following cases of infectious diseases were landed from the shipping :—

Smallpox	... 9	Influenza	... 254
Measles	... 2	Diphtheria	... 1
Plague	... 1	Pneumonia (influenzal)	... 3
Chickenpox	... 5		

Besides the above, four cases of smallpox were also landed from dhows and treated at the Infectious Diseases Hospital, Maalla, Aden.

II.—Pilgrim Traffic.

Twenty-five ships carrying pilgrims passed through the port during the year. All were medically examined ; but they were not granted pratique.

Year.	No. of Ships.	No. of pilgrims.	No. of deaths.
1919	25	25,293	71

III.—Table A.

The following is the list of vessels on board of which cases of infectious diseases existed on arrival at this port during the year :—

Date.	Name of Ship.	Nationality.	From	To	No. of cases.	Remarks.
6th January 1919 ...	H. T. "St. Alban" ...	British ...	.....	...	2 C. P.	Landed.
7th January 1919 ...	S. S. "Unknown" ...	.....	Perim ...	Aden ...	*5 Infl.	,,
8th January 1919 ...	,, "Jehangir" ...	British ...	Bombay ...	Suez ...	1 C. P.	Isolated on board.
24th January 1919 ...	,, "Manora" ...	,, ...	,, ...	London ...	1 S. P.	Landed.
					1 Mls.	Isolated on board.
27th January 1919 ...	,, "Unknown" ...	.....	Kamaran ...	Aden ...	*1 Infl.	Landed.
27th February 1919 ...	H. T. "Palamcotta".	British ...	Bombay ...	Suez ...	*1 Infl.	,,
28th February 1919 ...	S. S. "Merkara" ...	,, ...	,, ...	London ...	1 C. P.	In infants, isolated on board.
15th March 1919 ...	H. T. "Chupra" ...	,, ...	,, ...	Overseas ...	*1 S. P.	Landed.
16th March 1919 ...	,, "Ormara" ...	,, ...	.....	.....	1 C. P.	,,
20th March 1919 ...	H. M. S. "Diana" ...	,, ...	.....	.....	1 S. P.	,,
28th March 1919 ...	S. S. "Irismere" ...	,, ...	Port Said ...	Delagoa Bay ...	1 C. P.	,,
3rd April 1919 ...	,, "Clan Maclaren"	,, ...	Zanzibar ...	Liverpool ...	1 C. P.	,,
14th April 1919 ...	,, "Akbar" ...	,, ...	Bombay ...	Mossawa ...	1 Mls.	,,
15h April 1919 ...	H. T. "Jeddah" ...	,, ...	,, ...	Overseas ...	*5 Infl.	,,
25th April 1919 ...	,, "Ellora" ...	,, ...	.....	.....	1 Ger. mls.	On board.
Do. ...	,, "Burma" ...	,, ...	.....	.....	1 S. P.	Landed.
10th May 1919 ...	S. S. "Polladern" ...	,, ...	.....	...	1 Mls.	,,
13th May 1919 ...	A. T. "Vita" ...	,, ...	Bombay ...	Overseas ...	*2 Pn. infl.	,,
15th May 1919 ...	S. S. "Africa" ...	,, ...	Berbera ...	Aden ...	*1 Infl.	,,
Do. ...	,, "Polladern" ...	,, ...	.....	.....	1 S. P.	,,
16th May 1919 ...	,, "Margha" ...	,, ...	Bombay ...	Suez ...	*1 Pn. infl.	,,
25th May 1919 ...	,, "War Armour".	,, ...	Italy ...	Australia ...	1 S. P.	,,
7th July 1919 ...	R. I. M. S. "Hardinge."	,, ...	Bombay ...	Suez ...	*1 Diph.	,,
7th August 1919 ...	H. T. "War Mansion."	,, ...	Suez ...	Colombo ...	1 Chl.	Death on board.
2nd October 1919 ...	S. S. "Malta" ...	,, ...	Bombay ...	London ...	Influenza existed among crew.	Twenty cases on board between Bombay and Aden.

* Denotes the cases landed and treated by the Military Authorities in Aden.

Date.	Name of Ship.	Nationality.	From	To	No. of cases.	Remarks.
9th October 1919 ...	S. S. "Orenoque" ...	French ...	Djibouti ...	Marseilles ...	1 Plg.	Landed.
11th October 1919 ...	" "Sphinx" ...	" ...	Marseilles ...	Djibouti ...	2 Plg.	Isolated on board.
17th November 1919...	" "Clan Buchanan."	British ...	Port Said ...	Colombo ...	1 S. P.	Landed.
8th December 1919 ...	H. T. "Shuja" ...	" ...	Bombay ...	Suez ...	*229 Infl.	"
					† Infl.	"
10th December 1919...	" "Kara Deniz".	" ...	Suez ...	Bombay ...	*2 Infl.	"
11th December 1919...	" "Steigerwald".	" ...	Bombay ...	Suez ...	*8 Infl.	"
Do. ...	" "Shuja" ...	" ...	While she was lying in the harbour.		*1 Infl.	"
12th December 1919...	" "Elephanta".	" ...	Marseilles ...	Bombay ...	Infl.	Existed on board.
16th December 1919...	" "Franz Ferdinand."	" ...	Bombay ...	Suez ..	1 S. P.	Landed.
					*1 S. P.	"
17th December 1919...	R. I. M. S. "Northbrook."	" ...	Karachi ...	" ...	Infl.	Several cases removed at Aden.

N.B.—C. P. stands for chickenpox; Infl., for influenza; S. P., for smallpox; Mls., for measles; Ger. Mls., for German measles; Pn. Infl., for influenzal pneumonia; Diph., for diphtheria; Plg., for plague; Chl., for cholera.

* Denotes the cases landed and treated by the Military Authorities in Aden.

† Case landed and treated by the Port Health Department.

IV.—The following are the names and other information regarding the pilgrim ships which passed through Aden during the year under report :—

No.	Date.	Names of Ships.	Nationality.	From	To	No. of		
						Pilgrims.	Infectious cases.	Deaths.
1	25th May 1919 ...	S. S. "Akbar" ...	British ...	Bombay...	Jeddah ...	898	...	6
2	15th June 1919 ...	" "Shushter" ...	" ..	" ...	" ...	840	...	1
3	2nd July 1919 ...	" "Khosrou" ...	" ...	" ...	" ...	890	...	9
4	22nd July 1919 ...	" "Akbar" ...	" ...	" ...	" ...	1,259	...	6
5	24th July 1919 ...	" "Shushter" ...	" ...	Karachi ...	" ...	798	...	...
6	1st August 1919 ...	" "Hejaz" ...	" ...	Bombay...	" ...	935	...	10
7	14th August 1919 ...	" "Zayani" ...	" ...	" ...	" ...	1,089	...	7
8	15th August 1919 ...	" "Nairung" ...	" ...	Busrah ...	" ...	939	...	10
9	16th August 1919 ...	" "Khosrou" ...	" ...	Karachi ...	" ...	930	...	...
10	20th August 1919 ...	" "Iran" ...	" ...	Bombay...	" ...	937	...	3
11	22nd August 1919 ...	" "Chakla" ...	" ...	Karachi ...	" ...	837	...	...
12	Do. ...	" "Sofala" ...	" ...	Bombay...	" ...	1,697	...	3
13	25th August 1919 ...	" "Akbar" ...	" ...	" ...	" ...	1,321	...	2
14	20th September 1919.	" "Akbar"	" ...	Jeddah ...	Bombay ...	1,238	...	1
15	23rd September 1919.	" "Nurani" ...	" ...	" ...	Karachi ...	850	...	...
16	Do. ...	" "Hejaz" ...	" ...	" ...	Bombay ...	849	...	...
17	24th September 1919.	" "Shushter" ...	" ...	" ...	" ...	830	...	3
18	28th September 1919.	" "Nairung" ...	" ...	" ...	" ...	647	...	3
19	28th October 1919 ...	" "Khosrou" ...	" ...	" ...	" ...	985	...	...
20	30th October 1919 ...	" "Zayani" ...	" ...	" ...	" ...	1,219	...	...
21	10th November 1919.	" "Shushter" ...	" ...	" ...	" ...	1,006	...	3
22	Do.	" "Akbar" ...	" ...	" ...	" ...	1,595	...	1
23	29th November 1919.	" "Nairung" ...	" ...	" ...	Bombay via Mucalla and Karachi.	949	...	1
24	4th December 1919 ...	" "Hejaz" ...	" ...	" ...	Karachi and Bombay.	1,008	...	1
25	16th December 1919 .	" "Khosrou" ...	" ...	" ...	Bombay ...	746	...	1

V.—Statement showing the number of cases treated at the Infectious Diseases Hospital, Maalla, during the year under report :—

Year.	Remaining as per last return.	Admissions.	Deaths.	Protected.	Unprotected.
1919	1	71	5	36	35

Source of admission.						Europeans.
Shipping.	Steamer Point.	Maalla.	Crater.	Shaikh Othman.	Interior.	
29	7	9	7	4	15	5

N.B.—Of the above number, there were 45 cases of smallpox, 10 measles, 4 chickenpox, 1 scarlet fever, 1 mumps and 10 suspicious cases kept under observation for smallpox, etc.

VI.—Statement showing the tubes received, their cost and the vaccination operations performed during the year at the Port and the European General Hospital, Aden :—

No. of tubes, Bombay Municipality Vaccine.	Cost.	Total No. of operations performed.	Primary.	Re-vaccination.
	Rs.			
436	109	383	305	78

Result.

Successful.		Unsuccessful.		Unknown.	
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
174	38	22	18	109	22

VII.—Establishment.

Dr. John C. Young, M.B., C.M., D.T.M., held the appointment of Acting Port Health Officer, Aden, from 1st to 16th January 1919 and was relieved by Lieut.-Colonel J. L. Marjoribanks, I. M. S., on the 17th January 1919. The latter officer held the appointment up to the 31st December 1919.

VIII.—Office Establishment.

Captain A. Baldwin D'Sousa, I. M. D., held charge of the clerical duties of the Port Health Office from 1st January to 31st December 1919.

Saif Ghalib was appointed to act for peon Ali Ahmed, who was on leave up to 3rd January 1919. The peon rejoined from leave and resumed his duties from 4th January 1919 and continued up to the 31st December 1919.

IX.—Launch Establishment.

1. Driver Husein Noman, from 1st January to 31st December 1919.

2. Succani Md. Magon, from 1st January to 31st December 1919.

3. Stoker Abdu Noman from 1st January to 10th August 1919. The stoker was granted leave on medical certificate combined with privilege leave from 11th August to 30th November 1919. Ahmed Noman was appointed to act for him during his absence on leave. The services of the acting stoker were dispensed with on return of the stoker from leave.

4. Lascar Ali Magon, from 1st January to 31st December 1919.

X.—Disinfecting Stove.

The services of the fireman were maintained for the care of the disinfecting stove during the year.

J. L. MARJORIBANKS,
Lieut.-Colenel, I. M. S.,
Health Officer, Port of Aden.

APPENDIX III.

The following table shows when drainage systems and water-works were completed in the towns mentioned therein, with the average annual death-rate for the five-year period preceding the introduction and also the ratio for the five-year period ending with the year under report, exclusive of recorded plague mortality:—

The rural death-rates for each district are added for comparison.

District.	Táluka.	Town.	Date of completion of works of		Average annual death-rate for the five-year period ending with 1919 exclusive of plague.	Average annual death-rate for the five-year period preceding the introduction of drainage or water-supply or both.	Death-rate in rural circles for the year 1919.	Plague mortality in rural circles for the year 1919.
			Drainage.	Water-supply.				
1	2	3	4	5	6	7	8	9
.....	.....	Bombay	*a* 1879	*b* 1892	42·48	27·98	.....	.....
West Khándesh	Dhulia	Dhulia	.....	1896	28·46	32·50	47·97	8·67
Ahmednagar	Ahmednagar	Ahmednagar	.....	1897	38·45	55·65	28·73	.....
Surat	Chorási	Surat	.....	1898	33·92	39·77	35·02	.....
Ahmedabad	Daskroi	Ahmedabad	*c* 1893	1891	52·28	45·21	24·06	.....
Karáchi	Karáchi	Karáchi	*c* 1895	1894	49·11	35·15	10·92	.....
Sukkur	Sukkur	Sukkur	.....	1895	39·54	28·70	19·66	.....
Thána	Bándra	Bándra	.....	1896	27·76	23·01	40·16	·04
Kolába	Panvel	Panvel	.....	1895	22·44	19·50	50·16	.....
Dhárwár	Hubli	Hubli	.....	1894	34·79	25·70	36·35	5·75
Ahmedabad	Viramgám	Viramgám	*d* 1893	.....	48·70	69·28	29·95	·01
East Khándesh	Jalgaon	Jalgaon	.....	1909	35·60	31·56	27·55	.....
Sholápur	Pandharpur	Pandharpur	.....	1911	49·24	49·98	28·74	·03
Násik	Násik	Násik	.....	1913	40·36	52·73	47·48	.....
Bijápur	Bijápur	Bijápur	.....	1913	31·54	30·08	25·07	·43
Poona	Haveli	Poona	1916	.....	53·44	36·47	34·88	·02

a Drainage works commenced in 1879 are still in progress.

b Thána water-works completed in 1892. Besides there are Vehár and Tulshi water-works.

c Drainage system partially introduced.

d In 1893 the gradient of the channel round the town was improved to carry away the sullage water that used to accumulate and stagnate round the town.

APPENDIX IV.

ANNUAL FORM No. I.—*Showing the Births registered in the Districts of the Bombay Presidency during the year 1913.*

1	2	3			4			5			6	7	8	9		
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1911.			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of Births over Deaths per 1,000 of Population.	Excess of Deaths over Births per 1,000 of Population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.				Male.	Female.	Total.
	Western Registration District.															
1	East Khándesh ..	521,546	512,668	1,034,214	22,255	20,395	42,650	21·51	19·72	41·23	109·12	11·07	..	25·04	23·54	48·58
2	West Khándesh ..	293,300	287,380	580,680	11,356	10,627	21,983	19·55	18·30	37,85	106·86	..	1·17	25·40	24·57	49·97
3	Násik	455,045	448,599	903,644	14,459	13,490	27,949	16·00	14·92	30·92	107·18	..	8·75	22·79	21·51	44·30
4	Thána	456,673	424,235	880,908	9,735	9,194	18,929	11·05	10·44	21·49	105·77	..	20·71	17·11	16·34	33·45
5	Kolába	295,085	298,972	594,057	7,482	7,092	14,574	12·59	11·94	24·53	105·49	..	23·93	20·04	19·06	39·10
6	City of Bombay ..	629,854	333,509	963,363	10,696	9,779	20,475	11·10	10·15	21·25	109·38	..	49·27	10·92	10·40	21·32
	Central Registration District.															
7	Ahmednagar	475,163	468,828	943,991	14,203	13,090	27,293	15·04	13·87	28·91	108·50	..	1·77	20·71	19·49	40·20
8	Poona	538,238	526,568	1,064,806	13,890	12,602	26,492	13 04	11·84	24·88	110·22	..	13·79	17·35	16·11	33·46
9	Sholápur	391,311	376,706	768,017	13,124	12,190	25,314	17·09	15·87	32·96	107·66	1·29	..	20·66	19·61	40·26
10	Sátára	538,841	541,957	1,080,798	16,817	15,840	32,657	15·56	14·66	30·22	106·14	3·16	..	20·10	19·04	39·14
11	Ratnágiri	553,268	650,234	1,203,502	15,166	14,447	30,113	13·02	12·00	25·02	108·44	..	2·75	16·99	15·96	32·95
	Southern Registration District.															
12	Belgaum	478,458	463,490	941,948	16,053	15,598	31,651	17·04	16·56	33·60	102·92	9·82	..	20·87	20·11	40·98
13	Dhárwár	519,995	505,091	1,025,086	16,410	15,935	32,345	16·01	15·54	31·55	102·98	2·28	..	20·12	19·45	39·57
14	Bijápur	433,866	429,061	862,927	13,162	12,461	25,623	15·25	14·44	29·69	105·63	2·13	..	19·45	18·78	38·23
15	Kánara	220,065	210,369	430,434	6,336	5,935	12,271	14·72	13·79	28·51	106·76	·23	..	17·23	16·44	33·67
	Gujarát Registration District.															
16	Surat	326,839	327,135	653,974	11 236	10,435	21,671	17·18	15·95	33·13	107·67	..	3·38	19·98	19·4	39·02
17	Broach	158,219	148,448	306,667	6,530	6,16	12,697	21·29	20·12	41·41	105·90	·61	..	23·12	21·80	44·92
18	Kaira	370,174	321,468	691,642	11,697	10,785	22,482	16·91	15·59	32·50	108·43	4·35	..	22·03	19·86	41·89
19	Panch Mahás ..	165,902	156,751	322,653	5,807	5,456	11,263	17·99	16·91	34·90	106·43	6·93	..	23·43	22·33	45·76
20	Ahmedabad	432,124	395,213	827,337	15,174	13,690	28,864	18·34	16·54	34·88	110·84	1·34	..	21·72	19·73	41·45
	Sind Registration District.															
21	Karáchi	290,390	225,943	516,333	5,671	4,927	10,598	10·98	9·55	20·53	111·00	..	4·86	12·39	10·67	23·07
22	Hyderabad	337,526	273,584	611,110	5,782	4,425	10,207	9·46	7·24	16·70	130·67	..	6·46	9·35	6·76	16·11
23	Thar and Párkar ..	241,274	192,091	433,365	2,886	2,218	5,104	6·66	5·12	11·78	130·12	..	10·34	11·34	8·93	20·27
24	Nawabshah	247,719	200,759	448,478	3,685	2,682	6,367	8·24	5·96	14·20	137·40	..	6·52	11·35	8·26	19·61
25	Lárkána	359,207	301,621	660,828	6,073	4,732	10,805	9·19	7·16	16·35	128·34	..	2·98	12·39	9·90	22·29
26	Sukkur	312,732	260,803	573,535	6,390	5,095	11,485	11·14	8·88	20·02	125·42	..	·03	13·05	10·41	23·46
27	Upper Sind Frontier..	145,541	117,445	262,986	2,620	1,978	4,598	9·96	7·52	17·48	132·45	..	1·43	13·17	10·27	23·44
	Total for the Presidency ..	10,188,455	9,398,928	19,587,383	285,195	261,265	546,460	14·56	13·34	27·90	109·16	..	4·63	18·46	17·11	35·57

ANNUAL FORM No. II.—*Showing the* BIRTHS *and* DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1919.*

1	2	3	4	5			6		7			8
Number.	Districts.	Area in square miles.	Average population per square mile.	Population (Census 1911).			Births.		Number of Deaths registered.			Number of Deaths of males to every 100 Deaths of females.
				Male.	Female.	Total.	Total Number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.	
	Western Registration District.											
1	East Khándesh	4,550	227	521,546	512,668	1,034,214	42,650	41·23	16,190	15,012	31,302	107·85
2	West Khándesh	5,439	106	293,300	287,380	580,680	21,383	37·85	11,539	11,123	22,662	103·74
3	Násik	5,879	154	455,045	448,599	903,644	27,949	30·92	18,746	17,112	35,858	109·55
4	Thána	3,576	246	456,673	424,235	880,908	18,929	21·49	19,515	17,657	37,172	110·52
5	Kolába	2,169	274	295,085	298,972	594,057	14,574	24·53	14,633	14,145	28,778	103·45
6	City of Bombay	22·5	41,483	629,854	333,509	963,363	20,475	21·25	38,699	29,237	67,936	132·36
	Central Registration District.											
7	Ahmednagar...	6,613	142	475,163	468,828	943,991	27,293	28·91	15,280	13,685	28,965	111·66
8	Poona	5,366	198	538,238	526,568	1,064,806	26,492	24·88	21,800	19,381	41,181	112·49
9	Sholápur	4,556	169	391,311	376,706	768,017	25,314	32·96	12,785	11,536	24,321	110·83
10	Sátára	4,818	224	538,841	541,957	1,080,798	32,657	30·22	15,354	13,902	29,256	110·44
11	Ratnágiri	3,989	302	553,368	650,234	1,203,602	30,119	25·02	16,782	16,642	33,424	100·84
	Southern Registration District.											
12	Belgaum	4,613	204	478,458	463,490	941,948	31,651	33·60	11,520	10,880	22,400	105·88
13	Dhárwár	4,604	223	519,995	505,091	1,025,086	32,345	31·55	15,133	14,875	30,008	101·73
14	Bijápur	5,707	151	433,866	429,061	862,927	25,623	29·69	12,232	11,553	23,785	105·88
15	Kánara	3,946	109	220,065	210,369	430,434	12,271	28·51	6,262	5,911	12,173	105·94
	Gujarát Registration District.											
16	Surat	1,651	396	326,839	327,135	653,974	21,671	33·13	12,160	11,718	23,878	103·77
17	Broach	1,468	209	158,219	148,448	306,667	12,397	41·41	6,300	6,213	12,513	101·40
18	Kaira	1,596	433	370,174	321,468	691,642	22,452	32·50	10,227	9,243	19,740	110·65
19	Panch Mahals	1,606	201	165,902	156,751	322,653	11,263	34·90	4,463	4,562	9,025	97·83
20	Ahmedabad	3,824	216	432,124	395,213	827,337	28,864	34·88	14,541	13,210	27,751	110·08
	Sind Registration District.											
21	Karáchi	11,782	44	290,390	225,943	516,333	10,598	20·53	7,353	5,758	13,111	127·70
22	Hyderabad	4,417	138	337,526	273,584	611,110	10,207	16·70	7,735	6,424	14,157	120·37
23	Thar and Párkar	13,638	32	241,274	192,091	433,365	5,104	11·78	5,585	4,002	9,587	139·56
24	Nawabshah	3,867	116	247,719	200,759	448,478	6,367	14·20	5,049	4,262	9,311	118·46
25	Lárkana	5,053	131	359,207	301,621	660,828	10,805	16·35	6,815	5,957	12,772	114·40
26	Sukkur	1,606	201	312,732	260,803	573,535	11,485	2·02	6,068	5,432	11,500	111·71
27	Upper Sind Frontier ...	2,644	99	145,541	117,445	262,986	4,598	17·48	2,784	2,190	4,974	127·12
	Total for the Presidency ...	122,978	159	10,188,455	9,398,928	19,587,383	546,460	27·90	335,548	301,622	637,170	111·25

1	2	9										10		
Number.	Districts.	Deaths per 1,000 of Population from										Mean Ratio of Deaths per 1,000 during previous five years.		
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	All causes.				
										Male.	Female.	Total.	Male.	Female.	Total.
	Western Registration District.														
1	East Khándesh	1·80	·25	·42	13·12	1·68	4·26	·28	8·35	31·04	29·28	30·16	52·50	51·07	53·25
2	West Khándesh	4·43	·88	3·78	15·31	·86	3·60	·34	9·82	39·34	38·70	39·02	54·01	55·81	54·90
3	Násik	4·45	·52	·02	17·15	2·20	5·35	·33	9·66	41·19	38·14	39·69	54·98	57·35	56·16
4	Thána	7·34	·30	·21	21·99	1·49	1·93	·58	5·36	42·73	41·62	42·20	37·47	37·34	36·37
5	Kolába	13·78	·14	·21	21 07	2·02	2·56	·45	8·21	49·59	47·31	48·44	39·01	39·15	39·08
6	City of Bombay	8·74	·80	·72	5·78	4·56	26·39	·84	22·68	61·44	87·66	70·52	30·77	45·82	38·19
	Central Registration District.														
7	Ahmednagar	3·98	·20	·05	11·09	3·45	4·89	·28	6·74	32·16	29·19	30·68	47·28	49·03	48·50
8	Poona	3·53	·35	0·07	15·37	3·72	6·84	·34	8·45	40·50	36·81	38 67	45·43	46 62	46·02
9	Sholápur	2·57	1·08	0 11	13·53	3·27	2·44	·43	8·23	32·87	30 62	31·66	59·99	63·76	61·84
10	Sátára	2·17	·12	1·30	13·43	2·49	1·71	·43	5·41	28·49	25·65	27·06	50·92	53 27	52·09
11	Ratnágiri	1 87	·11	·36	13·76	1·40	4·54	·40	5·33	30·31	25·59	27·77	30·80	28·35	29·48
	Southern Registration District.														
12	Belgaum	·28	·19	·61	5·40	3·18	2·86	·51	10·74	24·08	23·47	23·78	46·35	48·05	47·18
13	Dhárwár	·01	·34	2·38	9·51	1·60	3·53	·43	11·47	29·07	29·04	29·27	44·20	46·72	45·44
14	Bijápur	·34	·29	·29	11·27	3·23	3·30	·44	8 38	28·19	26·92	27·56	49·69	52·37	51·02
15	Kánara	·54	·66	·15	10·62	3·14	1·56	·58	11·03	28·46	28·10	28·28	36·72	37·29	37·00
	Gujarát Registration District.														
16	Surat	3·99	·05	·06	12·00	1·19	10·34	·33	8·55	37·21	35·82	36·51	39·73	39 65	39·69
17	Broach	3·13	·18	·15	18·15	1·10	8·78	·32	8·99	39·82	41·85	40·80	45·37	48 26	46·79
18	Kaira	·94	·04	·03	10·04	1·33	8·31	·56	6·90	27·63	28·75	28 15	42·23	44 96	43·50
19	Panch Mahals	1·48	·09	...	14·55	1·12	2·53	·40	7·80	26·96	29·10	27·97	30·35	30 84	30·57
20	Ahmedabad	·14	·12	·01	15·45	1·71	8·92	·49	6·70	33·65	33·42	33·54	46·47	49·59	47·96
	Sind Registration District.														
21	Karáchi	·01	·21	·58	13·46	·33	2·89	·26	7·25	25·30	25·48	25·39	30·94	33·17	32·12
22	Hyderabad	...	·29	·63	19·39	·19	1·83	·26	1·12	22·91	24·48	23·16	31·18	32·58	31·81
23	Thar and Párkar	...	...	...	19·92	·09	1·25	·15	·71	23·15	20·83	22·12	34·74	36·87	35·69
24	Nawabshah	·04	·05	·01	18 96	·07	·90	·22	·51	20·39	21·23	20·76	34·40	36·31	35·28
25	Lárkana	·17	·53	...	17 08	·06	·61	·26	·63	18 97	19·78	19·34	31·91	34·21	33·96
26	Sukkur	·32	·16	...	16·64	·14	·51	·25	2·03	19·40	20·83	20·05	36·58	41·09	38·63
27	Upper Sind Frontier ...	·02	·32	...	17·71	·06	·18	·26	·37	19·20	17·68	18·92	32·85	37·46	34·08
	Total for the Presidency...	2·63	·32	·49	14·03	1·96	5·04	·40	7·67	32·93	32·09	32·53	42·23	44·97	43·55

ANNUAL FORM No. III.—DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1919.*

1	2	3												4	5
No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total Deaths registered during the year.	No.
	Western Registration District.														
1	East Khándesh	2,929	2,028	2,183	1,956	2,144	1,866	3,835	4,061	3,011	2,556	2,204	2,429	31,202	1
2	West Khándesh	2,387	1,711	1,603	1,380	1,140	1.055	2,408	3,187	2,255	2,076	1,841	1,819	22,662	2
3	Násik	2,971	2,224	2,261	2,222	2,904	3,384	4,968	4,396	2,757	2,724	2,272	2,875	35,858	3
4	Thána	3,522	3,333	3,503	3,493	4,136	3.456	3,286	3,258	2,181	2,239	2,218	2,547	37,172	4
5	Kolába	2,520	2,970	2,127	1,929	1,897	2,020	4,273	3,566	1,874	1,472	1,809	2,321	28,778	5
6	City of Bombay	11,291	7,304	5,046	6,617	7,041	4,728	4,822	4,810	4,818	4,438	3,692	3,829	67,936	6
	Central Registration District.														
7	Ahmednagar	1,720	1,559	1,794	1,736	2,372	2,760	3,558	4,027	2,921	2,554	1,813	2,152	28,965	7
8	Poona	2,926	3,060	3,649	3,397	3,646	3,325	5,164	4,257	3,097	2,952	2,384	3,324	41,181	8
9	Sholápur	1,934	1,635	1,843	2,195	2,272	2,007	2,881	2,543	1,711	1,794	1,561	1,945	24,321	9
10	Sátára	2,211	1,747	1,930	1,973	3,161	2,588	2,759	3,064	2,432	2,380	2,236	2,715	29,256	10
11	Ratnágiri	3,411	3,155	2,454	2,459	2,631	1,916	2,935	3,479	2,944	2,720	2,423	2,897	33,424	11
	Southern Registration District.														
12	Belgaum	2,015	1,558	1,795	1,571	1,742	1,999	2,032	2,025	1,782	1,950	1,950	2,116	22,400	12
13	Dhárwar	3,164	2,161	2,398	2,058	2,097	1,979	2,173	2,245	2,388	2,843	2,912	3,680	30,008	13
14	Bijápur	2,077	1,474	1,716	1,710	1,762	1,763	2,243	2,237	2,131	2,370	2,011	2,291	23,785	14
15	Kánara	1,339	941	986	702	808	787	966	1,212	1,081	1,059	1,034	1,258	12,173	15
	Guiarát Registration District.														
16	Surat	2,132	1,734	2,014	1,926	2,190	2,754	2,859	2,078	1,389	1,366	1,528	1,908	23,878	16
17	Broach	1,172	1,050	1,147	1,651	1,476	900	1,964	887	724	637	857	848	12,513	17
18	Kaira	1,528	1,261	1,545	1,463	1,427	992	1,503	2,660	1,845	1,921	1,695	1,625	19,470	18
19	Panch Maháls	640	644	633	645	601	593	874	1,263	1,049	841	652	590	9,025	19
20	Ahmedabad...	1,899	1,838	2,319	2,051	1,860	1,343	1,680	2,729	2,780	2,885	3,206	3,161	27,751	20
	Sind Registration District.														
21	Karáchi	2,860	975	1,079	842	980	623	571	604	763	754	964	2,096	13,111	21
22	Hyderabad	4,108	1,646	1,073	856	686	574	499	525	781	935	1,139	1,335	14,157	22
23	Thar and Párkar	2,908	1,304	713	763	661	445	377	337	376	534	551	618	9,587	23
24	Nawabshah	3,688	1,385	722	365	305	300	280	257	319	436	605	649	9,311	24
25	Lárkána	3,122	1,309	975	717	584	558	752	542	743	981	1,232	1,257	12,772	25
26	Sukkur	1,704	1,099	854	752	744	737	713	661	682	955	1,354	1,346	11,500	26
27	Upper Sind Frontier ...	1,323	735	353	290	305	271	299	206	221	352	323	296	4,974	27
	Total for the Presidency...	73,501	51,839	48,625	47,719	51,572	45,623	59,678	61,116	48,615	48,899	46,066	53,927	6,37,170	
	Ratio of deaths per 1,000 in each month... ...	3·75	2·65	2·48	2·44	2·63	2·33	3·05	3·12	2·48	2·50	2·35	2·75	32·53	

ANNUAL FORM No. IV.—DEATHS *registered according to* AGE IN THE

1	2	3										
		DEATHS UNDER ONE										
		Under one month.							Between one to six months.		
No.	Districts.	Male.			Female.			Total of columns 3 and 6.	Male.	Female.	Total.
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.				
	Western Registration District.										
1	East Khándesh	849	684	1,533	645	630	1,275	2,808	1,310	1,059	2,369
2	West Khándesh	509	298	807	345	318	663	1,470	702	544	1,246
3	Násik	723	542	1,265	603	494	1,097	2,362	903	834	1,737
4	Thána	470	362	832	364	320	684	1,516	597	576	1,173
5	Kolába	413	294	707	338	256	594	1,301	584	473	1,057
6	City of Bombay	1,233	841	2,074	906	707	1,613	3,687	2,221	2,059	4,280
	Central Registration District.										
7	Ahmednagar							2,128			1,615
8	Poona							1,965			1,979
9	Sholápur		Information not available.					2,014	Information not available.	Information not available.	1,529
10	Sátára							2,707			1,629
11	Ratnágiri							1,192			973
	Southern Registration District.										
12	Belgaum							1,654			1,497
13	Dhárwár							2,153			1,951
14	Bijápur		Information not available.					1,535			1,663
15	Kánara							1,341			702
	Gujarát Registration District.										
16	Surat	574	461	1,035	501	399	900	1,935	789	745	1,534
17	Broach	328	231	559	277	243	520	1,079	606	521	1,127
18	Kaira	346	359	705	405	405	810	1,515	693	657	1,350
19	Panch Mahals	151	149	300	140	124	264	564	377	328	705
20	Ahmedabad	560	557	1,117	427	467	894	2,011	1,201	975	2,176
	Sind Registration District.										
21	Karáchi	295	196	491	231	186	417	908	394	354	748
22	Hyderabad	280	199	479	273	197	470	949	207	175	382
23	Thar and Párkar	133	85	218	117	51	168	386	78	75	153
24	Nawabshah	145	129	274	124	106	230	504	101	81	182
25	Lárkána	187	188	375	177	148	325	700	188	151	339
26	Sukkur	314	298	612	261	243	504	1,116	278	250	528
27	Upper Sind Frontier	92	82	181	68	72	140	321	100	80	180
	Total for the Presidency ...	...	...	...	...	...	...	...	...	...	...
	Population according to Census of 1911	...	...	...	...	...	...	...	...	...	...
	Ratios per 1,000 living ...	...	...	...	...	...	...	...	...	...	...

DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1919.*

						4		5		6		7		8
YEAR														
Between seven to twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	1 year and under 5.		5 and under 10.		10 and under 15.		15 and under 20.		No.
Male.	Female.	Total.				Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1,193	1,056	2,249	4,036	3,390	7,426	3,608	4,004	1,113	1,088	502	468	244	384	1
508	602	1,110	2,017	1,809	3,826	2,663	2,957	1,173	1,105	627	525	313	408	2
1,026	849	1,875	3,194	2,780	5,974	4,393	4,418	1,468	1,308	664	627	538	670	3
345	301	646	1,774	1,561	3,335	2,537	2,471	1,613	1,541	879	842	721	803	4
322	233	555	1,613	1,300	2,913	1,986	2,070	1,275	1,263	660	576	458	559	5
2,770	2,719	5,489	7,065	6,391	13,455	4,028	4,427	1,308	1,369	1,111	1,038	2,656	2,083	6
		1,242	2,699	2,286	4,985	2,980	2,919	934	909	421	365	393	535	7
		2,219	3,460	2,703	6,163	3,860	3,797	1,475	1,356	764	660	552	609	8
		1,630	2,813	2,360	5,173	2,705	2,756	958	877	412	363	245	283	9
		876	2,805	2,407	5,212	2,883	2,858	1,034	998	630	501	386	452	10
		1,072	1,697	1,540	3,237	2,066	2,126	806	910	521	493	496	468	11
		1,270	2,386	2,035	4,421	2,299	2,445	788	817	368	353	256	264	12
		1,216	2,873	2,447	5,320	3,296	3,504	1,205	1,280	651	740	355	453	13
		812	2,217	1,793	4,010	2,496	2,697	1,048	908	389	356	209	232	14
		488	1,355	1,176	2,531	770	770	239	276	151	157	152	218	15
588	517	1,105	2,412	2,162	4,574	2,328	2,218	880	885	459	440	303	344	16
497	493	990	1,662	1,534	3,196	1,577	1,544	432	450	203	208	116	134	17
648	636	1,284	2,046	2,103	4,149	2,858	2,630	497	440	241	242	158	149	18
253	262	515	930	854	1,784	1,208	1,272	294	323	151	121	87	118	19
1,275	1,313	2,588	3,593	3,182	6,775	3,521	3,365	586	586	312	334	365	391	20
568	546	1,114	1,453	1,317	2,770	898	829	343	335	296	261	395	429	21
376	302	678	1,062	947	2,009	694	674	514	482	372	355	517	584	22
135	127	262	431	370	801	424	330	325	307	271	196	301	216	23
200	139	339	575	450	1,025	410	405	355	327	298	246	386	360	24
443	456	899	1,006	932	1,938	660	580	523	482	363	268	426	415	25
443	464	907	1,333	1,218	2,551	723	730	400	370	252	214	283	342	26
162	131	293	443	351	794	304	277	237	193	155	102	189	160	27
...	...	...	58,950	51,398	110,348	58,368	58,978	21,823	21,185	12,123	11,051	11,480	12,063	
...	...	...	333,992	333,705	667,697	1,039,360	1,066,123	1,286,872	1,204,044	1,129,222	893,170	852,854	752,848	
...	...	...	176·50	154·01	165·27	56·48	55·32	16·96	17·59	10·73	12·37	13·46	16·02	

ANNUAL FORM No. IV.—DEATHS *registered according to* AGE IN THE DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1919—contd.*

1	2	9		10		11		12		13	
No.	Districts.	20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.										
1	East Khándesh	782	1,027	1,078	945	1,103	697	1,083	684	2,441	2,325
2	West Khándesh	866	1,001	1,003	880	890	540	693	537	1,294	1,361
3	Násik	1,369	1,574	1,778	1,442	1,543	1,037	1,277	857	2,522	2,399
4	Thána	2,300	2,732	3,005	2,619	2,545	1,610	1,839	1,27	2,302	2,203
5	Kolába	1,577	1,935	1,852	1,824	1,678	1,226	1,584	1,18	1,950	2,209
6	City of Bombay	8,495	5,242	5,563	2,812	3,367	1,748	2,620	1,654	2,483	2,473
	Central Registration District.										
7	Ahmednagar	1 267	1,309	1,244	1,077	1,402	880	1,863	1,489	2,077	1,916
8	Poona	1,741	2,028	2,221	1,965	1,936	1,269	1,846	1,242	3,945	3,752
9	Sholápur	785	851	899	788	820	648	929	649	2,219	1,961
10	Sátára	1,222	1,171	1,190	1,064	1,147	797	1,169	835	2,888	2,819
11	Ratnágiri	1,614	1,878	1,763	1,839	1,749	1,343	1,882	1,528	4,188	4,517
	Southern Registration District.										
12	Belgaum	752	911	850	725	849	579	944	618	2,055	2,133
13	Dhárwár	1,093	1,410	1,109	1,176	1,051	779	1,147	924	2,353	2,162
14	Bijápur	754	921	794	812	866	627	1,184	818	2,275	2,389
15	Kánara	537	661	707	581	700	438	605	519	1,046	1,115
	Gujarat Registration District.										
16	Surat	913	1,168	1,026	1,134	958	766	912	679	1,969	1,922
17	Broach	370	477	364	467	408	346	423	262	745	791
18	Kaira	671	607	755	595	780	575	819	551	1,402	1,351
19	Panch Mahals	247	284	294	358	322	234	324	219	606	779
20	Ahmedabad	1,167	1,111	1,151	963	1,148	803	1,165	894	1,533	1,681
	Sind Registration District.										
21	Karáchi	1,385	973	888	587	625	315	399	232	671	490
22	Hyderabad	1,494	1,427	1,077	817	796	425	566	318	641	395
23	Thar and Parkar	1,087	815	995	695	675	411	478	289	598	373
24	Nawabshah	911	977	759	633	544	343	401	234	410	287
25	Lárkhána	1,029	1,186	822	782	755	469	558	326	673	517
26	Sukkur	730	917	676	581	574	344	498	264	599	452
27	Upper Sind Frontier	388	357	359	281	259	178	171	107	279	184
	Total for the Presidency	35,546	34,950	34,222	28,442	29,490	19,427	27,379	19,187	46,167	44,946
	Population according to Census of 1911	1,903,139	1,801,211	1,562,195	1,370,275	1,064,455	949,249	611,654	564,582	436,814	476,708
	Ratios per 1,000 living ...	18·68	19·40	21·91	20·74	27·70	20·47	44·76	33·99	105·69	94·66

ANNUAL FORM No. V.

ANNUAL FORM No. V.—DEATHS *registered according to* CLASSES

1	2	3						
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1911.						
		Mahomedans.	Hindus.	Jains.	Christians.	Parsis.	Other Classes.	Total.
	Western Registration District.							
1	East Khandesh	99,521	902,131	9,361	748	371	22,082	1,034,214
2	West Khandesh	31,323	474,200	3,796	586	233	70,542	580,680
3	Nasik	47,705	843,705	7,902	1,867	840	1,625	903,644
4	Thana	41,979	786,925	2,985	43,341	5,105	573	880,908
5	Kolaba	23,876	560,266	1,411	1,149	303	2,052	594,057
6	City of Bombay	179,346	664,042	20,460	41,273	50,931	7,311	963,363
	Central Registration District.							
7	Ahmednagar	47,959	855,676	15,284	23,622	222	1,228	943,991
8	Poona	48,936	991,738	11,731	8,230	2,695	1,476	1,064,806
9	Sholapur	55,377	703,215	7,643	1,412	334	36	768,017
10	Satara	36,688	1,028,176	14,883	815	209	27	1,080,798
11	Ratnagiri	85,303	1,110,594	1,913	5,678	46	68	1,203,602
	Southern Registration District.							
12	Belgaum	77,075	817,797	41,533	5,313	159	71	941,948
13	Dharwar	136,943	872,885	10,413	4,526	218	101	1,025,086
14	Bijapur	101,069	757,542	3,235	1,052	28	1	862,927
15	Kanara	28,731	383,624	1,251	16,729	14	85	430,434
	Gujrat Registration District.							
16	Surat	55,394	571,834	9,821	1,050	11,783	4,092	653,974
17	Broach	67,752	192,964	3,053	1,052	2,770	39,076	306,667
18	Kaira	63,280	598,165	6,609	23,490	81	17	691,642
19	Panch Mahals	22,273	274,339	1,542	1,810	204	22,485	322,653
20	Ahmedabad	92,018	693,209	35,899	3,584	1,639	988	827,337
	Sind Registration District.							
21	Karachi	396,334	111,748	650	3,625	2,202	1,774	516,333
22	Hyderabad	1,035,437	442,601	695	248	102	13,670	611,110
23	Thar and Parkar							433,365
24	Nawabshah							448,478
25	Larkana	557,517	101,687	1	21	6	1,596	660,828
26	Sukkur	414,671	155,156	3	207	96	3,402	573,535
27	Upper Sind Frontier	235,970	26,495	.....	10	5	506	262,986
	Total of the Presidency ...	3,987,477	14,920,914	212,074	191,438	80,596	194,884	19,587,383

N. B.—This and all the other Statements refer to Natives only and not to Europeans. "Hindus" include

in the Districts of the BOMBAY PRESIDENCY *during the year 1919.*

4							5						
NUMBER OF DEATHS REGISTERED.							RATIO OF DEATHS PER 1,000 OF POPULATION.						
Mahomedans.	Hindus.	Jains.	Christians.	Parsis.	Other Classes.	Total.	Mahomedans.	Hindus.	Jains.	Christians.	Parsis.	Other Classes.	Total.
2,369	28,785	13	20	8	7	31,202	23·80	31·91	1·39	26·74	21·56	·32	30·16
1,092	21,549	4	16	...	1	22,662	34·86	45·44	1·05	27·30	...	·01	39·02
1,448	34,298	18	55	20	19	35,858	30·35	40·65	2·28	29·46	23·81	11·68	39·68
1,271	34,276	26	1,470	95	34	37,172	30·28	43·56	8·71	33·92	18·61	59·34	42·20
1,230	27,424	7	41	6	70	28,778	42·59	48·94	4·96	35·68	19·80	34·11	46·44
11,296	50,435	1,791	2,464	1,518	432	67,936	62·98	75·95	87·54	59·70	29·80	59·09	70·52
1,240	27,576	20	128	...	1	28,965	25·66	32·53	1·31	5·42	...	·81	30·68
1,618	39,347	17	149	20	30	41,181	33·06	39·67	1·45	18·10	7·42	20·33	38·67
1,617	22,587	98	5	8	6	24,321	29·20	32·12	12·82	3·54	23·95	166·67	31·67
751	28,240	228	15	5	17	29,256	20·47	27·47	15·32	18·40	23·92	629·62	27·07
2,230	31,047	19	127	1	...	33,424	26·14	27·96	9·93	22·39	20·83	...	27·77
1,598	19,820	872	109	1	...	22,400	21·29	23·01	21·00	20·52	6·29	...	23·78
4,200	25,330	340	134	4	...	30,008	30·67	29·02	32·65	29·61	18·35	...	29·27
2,452	21,276	40	17	...	...	23,785	24·42	28·09	12·36	16·16	...	...	27·56
810	10,868	29	466	...	...	12,173	28·19	28·38	23·10	21·88	...	...	28·28
1,360	18,733	188	32	241	3,324	23,878	24·55	32·76	19·14	30·48	20·45	812·32	36·51
2,339	8,069	54	18	73	1,960	12,513	34·52	41·82	17·69	17·11	26·35	50·16	40·89
1,791	17,416	98	152	2	11	19,470	28·30	29·11	14·83	6·47	24·69	647·06	28·15
447	5,647	25	21	...	2,885	9,025	20·07	20·58	16·21	11·60	...	128·31	27·97
3,096	23,909	630	76	27	13	27,751	33·65	34·49	17·55	21·21	16·47	13·16	33·54
7,958	4,965	...	131	34	23	13,111	20·08	44·43	...	36·14	15·50	12·97	25·39
10,230	3,911	7	6	1	2	14,157							23·16
5,280	4,289	4	1	...	13	9,587	21·96	23·18	18·70	28·22	9·80	2·27	22·12
7,227	2,066	2	...	...	16	9,311							20·76
10,270	2,500	...	...	...	2	12,772	18·42	24·59	...	...	...	1·25	19·34
6,851	4,626	...	3	1	19	11,500	16·51	29·81	...	14·39	10·41	5·58	20·05
4,344	625	...	1	...	4	4,974	18·41	23·59	...	100·00	...	7·91	18·92
96,415	519,614	4,530	5,657	2,065	8,889	637,170	24·18	34·82	21·36	29·55	25·62	46·61	32·53

Hindus of all castes. "Other Classes" include Buddhists, Sikhs, Jews and all others.

ANNUAL FORM No. VI.—DEATHS *registered from different causes in the*

1	2	3	4				5	6	7	8	9	10	11	
			Births.										INJU	
No.	Districts and Towns.	Population according to Census of 1911.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female
	A.—DISTRICTS.													
	Western Registration District.													
1	East Khándesh ...	903,053	20,123	18,546	38,669	42·82	1,651	258	219	12,602	1,560	3,803	3	4
2	West Khándesh ...	538,084	10,673	10,052	20,725	36·66	2,492	501	1,025	8,644	454	1,811	4	9
3	Násik ...	813,511	13,103	12,247	25,350	31·16	3,672	384	14	14,462	1,718	4,117	2	5
4	Thána ...	791,861	8,752	8,306	17,058	21·54	5,939	190	41	20,803	1,045	1,197	19	14
5	Kolába ...	567,043	7,292	6,915	14,207	25·06	8,101	81	70	12,227	1,150	1,431	2	5
	Central Registration District.													
6	Ahmednagar ...	888,096	13,642	12,573	26,215	29·52	3,554	143	3	10,138	3,133	4,049	3	3
7	Poona ...	859,267	11,980	10,891	22,871	26·61	3,548	136	55	13,917	3,081	3,999	3	4
8	Sholápur ...	660,338	10,948	10,204	21,152	32·03	1,506	201	34	7,464	1,952	1,326	10	5
9	Sátára ...	1,025,700	16,317	15,373	31,690	30·90	2,237	127	1,406	14,065	2,606	1,624	11	10
10	Ratnágiri ...	1,136,710	14,867	13,719	28,586	25·15	2,110	120	165	15,910	1,584	5,162	4	9
	Southern Registration District.													
11	Belgáum ...	869,243	15,169	14,770	29,939	34·44	232	177	484	4,751	2,812	2,357	21	14
12	Dhárwár ...	885,871	14,200	13,806	28,006	31·61	9	301	1,374	8,777	1,306	2,535	28	31
13	Bijápur ...	792,582	12,219	11,550	23,769	29·99	296	221	252	9,304	2,656	2,511	34	49
14	Kánara ...	382,278	5,662	5,352	11,014	28·81	183	216	63	4,207	1,214	575	17	9
	Gujarat Registration District.													
15	Surat ...	512,580	9,400	8,710	18,110	35·33	2,361	29	34	7,038	535	5,154	7	2
16	Broach ...	242,979	5,310	5,065	10,375	42·70	828	56	45	4,950	294	1,849	1	1
17	Káira ...	594,309	9,912	9,105	19,017	32·00	585	26	11	5,252	741	4,954	7	11
18	Panch Mahális ...	291,248	5,281	5,011	10,292	35·34	419	25	...	4,273	353	790	2	4
19	Ahmedabad ...	568,530	9,964	8,952	18,916	33·27	20	37	1	9,662	599	2,895	1	8
	Sind Registration District.													
20	Karáchi ...	351,401	1,630	1,179	2,809	7·99	...	41	29	4,668	19	88	...	2
21	Hyderabad ...	523,747	4,384	3,208	7,592	14·22	...	15	...	11,004	34	492	4	8
22	Thar and Párkar ...	424,563	2,793	2,172	4,965	11·69	...	...	...	8,435	32	487	2	4
23	Nawábsháh ...	436,579	3,491	2,509	5,990	13·72	16	21	5	8,275	30	371	6	3
24	Larkana ...	628,336	5,506	4,227	9,733	15·49	106	305	...	10,584	36	312	16	7
25	Sukkur ...	468,207	4,426	3,536	7,962	17·00	130	53	...	7,336	45	139	2	9
26	Upper Sind Frontier ...	251,246	2,482	1,887	4,369	17·36	4	72	...	4,497	12	36	3	7
	Total of District ...	16,407,762	239,064	219,510	458,574	27·95	39,999	3,736	5,330	243,245	29,001	54,064	212	237
	B.—TOWNS.													
	East Khándesh District.													
1	Jalgaon ...	17,195	274	216	490	28·49	17	...	...	103	29	89	...	...
2	Bhusáwal ...	18,312	283	246	529	28·88	33	2	...	166	17	80	...	...
3	Chopda ...	17,008	298	210	508	29·87	15	4	...	103	20	61	...	...
4	Dharangaon ...	15,607	205	192	397	25·44	4	...	1	88	26	69	...	...
5	Párola ...	14,177	205	193	398	28·07	52	...	185	89	32	44	...	...
6	Amalner ...	13,232	191	167	358	27·05	...	...	...	99	5	72	...	...
7	Erandol ...	13,144	242	219	461	35·07	21	...	2	129	12	63	...	...
8	Nasírabad ...	13,033	265	246	511	39·20	...	...	...	64	37	71	...	...
9	Chálisgaon ...	9,453	169	160	329	34·80	64	...	23	124	3	64	...	...
	West Khandesh District.													
10	Dhulia ...	30,757	489	406	895	29·10	52	...	1,169	107	31	220	1	2
11	Nandurbár ...	11,839	194	169	363	30·66	31	9	...	140	15	56	...	...

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1919.*

RIES.				12	13	14 RATIO OF DEATHS PER 1,000 OF POPULATION.										No.
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-Pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.	
186	31	14	238	7,576	27,907	1·83	·29	·24	13·96	1·72	4·21	·26	8·39	30·90	54·75	1
120	39	12	184	5,318	20,429	4·63	·93	1·91	16·06	·84	3·37	·34	9·88	37·96	56·11	2
203	39	11	260	7,864	32,491	4·51	·47	·02	17·77	2·11	5·06	·32	9·67	39·93	56·45	3
261	159	4	457	3,813	33,485	7·50	·23	·05	26·27	1·32	1·51	·58	4·82	42·28	36·92	4
164	69	7	247	4,663	27,970	14·28	·14	·12	21·56	2·03	2·52	·44	8·23	49·32	39·61	5
204	32	5	247	5,996	27,263	4·00	·16	·00	11·42	3·53	4·55	·28	6·75	30·69	49·76	6
263	20	9	299	6,863	31,898	4·13	·16	·06	16·20	3·59	4·65	·35	7·98	37·12	46·03	7
213	29	12	269	4,887	17,639	2·23	·30	·05	11·30	2·96	2·01	·41	7·40	26·71	58·84	8
305	102	13	441	5,506	28,012	2·18	·12	1·37	13·72	2·54	1·58	·43	5·37	27·31	52·71	9
214	216	7	450	6,039	31,540	1·86	·11	·15	13·99	1·39	4·53	·39	5·32	27·74	29·69	10
364	43	13	455	9,433	20,701	·27	·20	·56	5·47	3·23	2·71	·52	10·85	23·81	48·04	11
272	34	3	368	9,961	24,631	·01	·34	1·55	9·92	1·47	2·86	·42	11·24	27·80	45·79	12
205	49	5	342	6,318	21,900	·37	·28	·32	11·74	3·35	3·17	·43	7·97	27·63	51·79	13
192	10	2	230	4,268	10,956	·48	·57	·16	11·01	3·18	1·50	·60	11·16	28·66	38·43	14
132	27	13	181	4,095	19,427	4·61	·06	·07	13·73	1·04	10·05	·35	7·99	37·90	40·09	15
46	15	13	76	1,937	10,035	3·41	·23	·19	20·37	1·21	7·61	·31	7·97	41·30	48·03	16
228	44	25	315	4,067	15,951	·98	·04	·02	8·84	1·25	8·34	·53	6·84	26·84	42·53	17
81	25	5	117	2,299	8,276	1·44	·09	...	14·67	1·21	2·71	·40	7·89	28·41	29·97	18
134	56	30	229	2,205	15,648	·04	·07	·00	16·99	1·05	5·09	·40	3·88	27·52	44·09	19
38	4	1	45	180	5,070	...	·12	·08	13·26	·05	·25	·13	·51	14·39	17·17	20
61	38	1	112	231	11,888	...	·03	...	21·01	·07	·94	·21	·44	22·70	25·58	21
25	28	...	59	276	9,269	...	...	...	19·87	·08	1·15	·14	·65	21·89	35·75	22
69	20	...	98	212	9,028	·04	·05	·01	18·96	·07	·85	·22	·48	20·68	35·43	23
109	33	...	165	210	11,718	·17	·48	...	16·84	·07	·49	·26	·33	18·64	32·38	24
72	23	...	106	226	8,035	·28	·11	...	15·67	·11	·30	·23	·48	17·17	30·06	25
46	9	...	65	61	4,747	·02	·29	...	17·87	·05	·14	·26	·24	18·87	33·88	26
4,207	1,194	205	6,055	104,504	495,934	2·44	·23	·32	14·82	1·77	3·29	·37	6·37	29·61	43·66	
1	1	1	3	179	420	·99	...	...	5·99	1·69	5·17	·17	10·41	24·42	45·71	1
17	...	3	20	194	512	1·80	·11	...	9·06	·93	4·37	1·09	10·59	27·95	41·78	2
5	...	...	5	109	317	·88	·23	...	6·06	1·18	3·59	·29	6·41	18·64	40·10	3
9	...	...	9	67	284	·26	...	·06	5·64	1·67	4·42	·58	5·57	18·20	39·53	4
5	...	...	5	114	521	3·67	...	13·05	6·27	2·25	3·12	·35	8·04	36·75	38·02	5
1	...	...	1	68	245	,,	...	...	7·48	·38	5·44	·08	5·14	18·52	44·44	6
3	1	...	4	149	380	1·60	...	·15	9·81	·91	4·79	·30	11·34	28·[illegible]	47·40	7
1	...	...	1	100	273	,,	...	...	4·91	2·84	5·45	·08	7·67	20·95	59·10	8
3	1	...	4	61	343	6·77	...	2·43	13·10	·32	6·76	·42	6·45	36·25	35·76	9
7	...	...	10	262	1,851	1·70	...	38·01	3·43	1·01	7·15	·32	8·51	60·18	34·59	10
4	...	...	4	127	382	2·62	·76	...	11·82	1·26	4·73	·33	10·72	32·26	52·20	11

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Inju-	
No.	Districts and Towns.	Population according to Census of 1911.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	B.—Towns—*contd.*													
	Nasik District.													
12	Násik ...	33,163	407	375	782	23·58	134	13	2	335	175	327	1	...
13	Yeola ...	16,275	190	172	362	48·05	42	1	..	257	26	136	...	...
14	Málegaon ...	19,542	498	423	921	47·13	121	60	1	241	41	73	...	...
15	Igatpuri ...	8,380	119	152	271	32·34	...	3	...	67	4	52	...	...
16	Manmád ...	6,947	78	68	146	21·02	31	5	...	80	13	32	...	...
17	Trimbak ...	4,078	55	40	95	23·29	8	...	...	46	5	37	...	1
18	Deoláli Cantonment ...	1,748	9	13	22	12·58	17	3	...	7	10	56	...	...
	Thana District.													
19	Thána ...	15,591	272	220	492	31·55	107	1	31	290	62	116	1	1
20	Bándra ...	22,885	254	227	481	21·02	92	38	73	104	90	186	1	2
21	Kurla ...	15,081	95	122	217	14·39	36	28	5	465	45	32	...	...
22	Bhiwandi ...	13,292	123	127	250	18·80	120	...	6	104	33	68	...	2
23	Kalyán ...	12,600	106	75	181	14·36	124	...	16	146	27	68	...	...
24	Bassein ...	9,598	133	117	250	26·05	47	11	10	98	12	37	...	...
	Kolaba District.													
25	Alibág ...	3,358	46	48	94	27·99	9	...	...	34	8	31	1	...
26	Panwel ...	7,744	35	38	73	9·43	10	1	...	89	6	30	...	...
27	Mahád ...	7,164	56	48	104	14·52	51	...	...	80	12	11	...	...
28	Urán ...	8,748	53	43	96	10·97	16	4	58	85	22	19	...	...
29	City of Bombay ...	963,363	10,696	9,779	20,475	21·25	8,420	771	697	5,570	4,396	25,419	30	20
	Ahmednagar District.													
30	Ahmednagar ...	33,878	261	249	530	15·14	153	46	48	150	76	440	2	...
31	Sangamner ...	14,269	159	139	298	20·88	41	...	...	145	16	31	1	...
32	Ahmednagar Cantonment, ...	7,748	121	129	250	33·27	7	...	...	33	29	101	...	...
	Poona District.													
33	Poona ...	126,201	1,426	1,217	2,643	20·94	128	224	16	1,928	708	2,826	...	...
34	Bárámati ...	10,190	169	158	327	32·10	11	1	1	27	27	63	...	...
35	Khed ...	8,056	50	67	117	14·53	52	...	...	70	37	23	...	...
36	Lonávala ...	12,295	94	101	195	15·86	13	2	...	135	25	45	...	...
37	Junnár ...	8,800	56	50	106	12·02	1	...	...	89	7	21	...	...
38	Poona Cantonment ...	30,958	57	54	111	3·58	2	4	2	176	31	172	...	...
39	Kirkee do. ...	9,019	58	64	122	13·52	2	11	...	26	43	138	...	...
	Sholapur District.													
40	Sholápur ...	61,032	1,513	1,393	2,906	47·61	254	522	53	1,815	274	377	4	...
41	Bársi ...	18,097	302	295	597	32·99	28	34	1	438	91	91	...	1
42	Pandharpur ...	28,550	361	298	659	23·08	189	73	...	674	194	127	...	1
	Sátara District.													
43	Sátára ...	18,665	154	147	301	16·13	17	5	...	211	47	139	...	...
44	Wái ...	7,280	97	77	174	23·90	34	2	...	84	6	27	...	...
45	Karád ...	11,228	64	58	122	10·87	24	...	2	56	6	7	...	...
46	Ashta ...	9,851	85	81	166	17·75	2	...	...	83	10	3	...	...
47	Islámpur ...	8,574	100	104	204	23·79	31	...	...	21	11	45	...	...
	Ratnagiri District.													
48	Ratnágiri ...	15,822	134	127	261	16·50	2	1	264	106	29	61	...	...
49	Vengurla ...	17,294	289	249	538	31·11	3	6	...	172	19	100	...	...
50	Málwan ...	22,080	274	246	520	23·55	28	2	...	283	54	84	...	...
51	Chiplun ...	11,696	102	106	208	17·78	112	3	...	86	5	58	...	...

No. VI—*continued.*

RIES.				13	14	15 Ratio of Deaths per 1,000 of Population.										16
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.	No.
14	3	...	18	409	1,413	4·04	·39	·06	10·10	5·28	9·86	·54	12·33	42·60	49·91	12
6	...	...	6	74	542	2·58	·06	...	15·79	1·59	8·36	·37	4·55	33·30	53·64	13
1	...	...	1	171	709	6·19	3·07	·05	12·33	2·09	3·73	·05	8·75	36·28	75·01	14
7	1	...	8	64	198	...	·36	...	7·99	·48	6·21	·95	7·64	23·63	31·86	15
6	...	...	6	50	217	4·47	·72	...	11·52	1·87	4·61	·86	7·19	31·24	42·61	16
1	...	...	2	50	148	1·96	...	...	11·28	1·23	9·07	·49	12·26	36·29	39·73	17
1	...	...	1	44	140	9·73	1·72	...	4·00	5·72	33·18	·57	25·17	80·09	59·50	18
14	1	...	17	258	882	8·05	·07	2·33	21·82	4·66	8·73	1·28	19·42	66·36	37·58	19
6	...	...	9	324	916	4·02	1·66	3·19	4·54	3·93	8·13	·39	14·16	40·02	27·62	20
3	...	...	3	34	648	2·39	1·86	·33	30·83	2·98	2·13	·20	2·25	42·97	29·70	21
3	...	3	8	124	463	9·03	...	·45	7·83	2·48	5·11	·60	9·33	34·83	35·88	22
9	...	...	9	43	433	9·84	...	1·27	11·59	2·14	5·40	·71	3·41	34·36	25·63	23
3	...	1	4	126	345	4·90	1·14	1·04	10·21	1·24	3·85	·42	13·14	35·94	34·38	24
5	...	...	6	60	148	2·68	...	...	10·13	2·38	9·23	1·79	17·86	44·07	42·29	25
3	1	...	4	58	198	1·30	·13	...	11·49	·77	3·87	·51	7·50	25·57	29·05	26
3	1	...	4	31	189	7·12	...	...	11·17	1·67	1·54	·55	4·33	26·38	30·99	27
3	...	...	3	66	273	1·83	·46	6·63	9·72	2·52	2·17	·34	7·54	31·21	18·97	28
756	1	4	811	21,852	67,936	8·74	·80	·72	5·78	4·56	26·39	·84	22·68	70·52	36·19	29
11	1	...	14	295	1,222	4·52	1·36	1·42	4·44	2·25	12·99	·41	8·71	36·10	51·71	30
1	...	...	2	20	255	2·87	...	...	10·06	1·12	2·17	·14	1·40	17·76	34·20	31
1	...	...	1	54	225	·90	...	...	4·26	3·74	13·03	·13	6·97	29·03	34·46	32
30	2	1	33	1,620	7,483	1·01	1·77	·13	15·27	5·61	22·40	·26	12·84	59·29	54·71	33
7	...	...	7	120	257	1·08	·10	·10	2·65	2·65	6·18	·69	11·77	25·22	44·75	34
2	...	...	2	77	261	6·45	...	...	8·69	4·60	2·85	·25	9·56	32·40	33·27	35
11	...	...	11	91	322	1·06	·16	...	10·98	2·03	3·66	·90	7·40	26·19	41·24	36
4	...	...	4	23	145	·11	...	...	10·09	·79	2·38	·45	2·62	16·44	30·84	37
1	...	1	2	101	490	·06	·13	·06	5·68	1·00	5·57	·06	3·27	15·83	21·90	38
...	...	...	...	105	325	·22	1·22	...	2·90	4·77	15·29	...	11·64	36·04	40·47	39
29	3	3	39	1,000	4,334	4·16	8·55	·87	29·74	4·49	6·17	·64	16·38	71·00	94·80	40
14	...	...	15	138	776	1·54	1·88	·05	24·21	5·03	1·71	·83	7·63	42·88	69·85	41
8	...	...	9	296	1,572	6·62	2·55	...	23·60	6·80	4·80	·32	10·37	55·08	55·62	42
6	2	...	8	212	639	·91	·27	...	11·30	2·52	7·45	·43	11·36	34·24	40·77	43
3	...	...	3	34	190	4·67	·27	...	11·53	·83	3·71	·41	4·67	26·09	39·70	44
4	...	1	5	34	134	2·14	...	·18	4·99	·53	·62	·44	3·03	11·93	40·70	45
3	...	...	3	20	121	·21	...	...	8·88	1·07	·32	·32	2·14	13·94	43·09	46
9	...	...	9	43	160	3·62	...	...	2·45	1·28	5·25	1·05	5·01	18·66	39·42	47
4	...	3	7	84	554	·13	·06	16·69	6·70	1·84	3·85	·44	5·31	35·02	25·15	48
4	1	...	5	138	443	·17	·35	...	9·95	1·10	5·78	·29	7·98	25·62	30·12	49
7	2	1	10	125	586	1·26	·09	...	12·82	2·45	3·81	·45	5·67	26·55	23·82	50
7	1	...	8	29	301	9·57	·26	...	7·35	·43	4·96	·68	2·48	25·73	25·22	51

1	2	3	4			5	6	7	8	9	10	11	12	
			Births.										Inju	
No.	Districts and Towns.	Population according to Census of 1911.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	B.—Towns—*contd.*													
	Belgaum District.													
52	Belgaum ...	31,451	378	358	736	23·40	12	2	84	154	54	157	...	...
53	Gokak ...	7,326	140	157	297	40·54	6	...	...	35	40	36	1	...
54	Athni ...	13,849	194	173	367	26·50	5	2	...	51	55	82	2	...
55	Nipani ...	10,779	153	125	278	25·79	6	...	1	62	16	39	...	...
56	Belgaum Cantonment.	9,300	19	15	34	3·66	6	2	9	32	14	24	...	...
	Dharwar District.													
57	Dharwar ...	29,370	391	420	811	27·61	...	19	20	161	70	175	1	...
58	Hubli ...	61,440	938	878	1,816	29·56	1	12	1,038	465	77	556	...	...
59	Gadag-Bettigeri ...	30,429	586	542	1,128	37·07	...	17	6	277	160	277	...	2
60	Ranebennur ...	10,931	221	214	435	39·84	...	...	...	30	19	61	1	...
61	Nawalgund ...	7,045	74	75	149	21·15	...	2	...	39	11	19	2	...
	Bijapur District.													
62	Bijapur ...	27,569	316	312	628	22·78	1	19	2	74	53	158	2	2
63	Bagalkot ...	17,294	300	290	590	34·12	...	10	...	166	61	92	2	2
64	Guledgudd ...	15,249	194	187	381	24·98	...	...	...	138	12	39	1	...
65	Ilkal ...	10,233	133	122	255	24·92	...	...	...	50	7	51	...	1
	Kanara District.													
66	Karwar ...	18,045	181	146	327	18·12	...	...	...	58	8	15	...	...
67	Kumta ...	10,343	152	154	306	29·59	24	8	...	74	39	26	1	...
68	Gokarn ...	5,304	117	92	209	39·40	...	...	...	34	30	27	...	...
69	Honawar ...	7,323	106	89	195	26·63	17	29	...	72	42	15	...	...
70	Bhatkal ...	7,141	118	102	220	30·81	10	31	...	125	20	15	1	...
	Surat District.													
71	Surat ...	1,14,733	1,460	1,364	2,824	24·61	140	5	6	552	205	1,403	2	1
72	Bulsar ...	15,972	222	230	452	28·30	95	1	...	132	28	107	2	...
73	Rander ...	10,689	154	131	285	26·67	11	...	...	125	9	100	...	...
	Broach District.													
74	Broach ...	43,353	801	711	1,512	34·87	117	...	1	262	18	688	3	...
75	Jambusar ...	8,991	229	183	412	45·82	5	...	...	140	13	122	...	...
76	Ankleshwar ...	11,344	190	208	398	35·08	9	...	...	214	11	35	...	...
	Kaira District.													
77	Kaira ...	7,297	77	99	176	24·12	1	...	...	61	13	143	...	...
78	Mehmadabad ...	6,330	78	90	168	26·55	4	...	...	91	9	14	...	...
79	Nadiad ...	27,145	519	442	961	35·40	9	...	...	629	35	241	1	...
80	Borsad ...	11,860	237	240	477	40·21	...	...	8	148	55	95	2	...
81	Anand ...	10,139	163	149	312	30·77	1	...	...	228	4	12	1	...
82	Umreth ...	13,651	303	265	568	41·60	5	...	...	132	18	108	...	1
83	Dakore ...	7,785	133	112	245	31·47	42	...	...	157	24	58	...	...
84	Kapadvanj ...	13,126	275	283	558	42·51	3	...	...	250	21	124	...	...
	Panch Mahals District.													
85	Godhra ...	22,102	245	209	454	20·54	60	2	...	171	8	20	3	...
86	Dohad ...	9,303	281	236	517	55·56	...	1	...	250	5	7	...	...
	Ahmedabad District.													
87	Ahmedabad ...	2,14,000	4,461	4,038	8,499	39·71	75	57	4	2,258	743	4,225	1	...
88	Dhandhuka ...	8,040	178	155	333	41·41	...	...	...	135	21	51	...	...
89	Viramgaon ...	20,769	297	273	570	27·44	19	2	...	442	17	134	...	3
90	Dholka ...	13,693	251	264	515	37·61	...	...	...	253	30	78	...	...
91	Ahmedabad Cantonment.	2,305	23	8	31	13·44	...	...	...	32	2	...	...	...

No. VI—*continued.*

BIES.				13	14	15 RATIO OF DEATHS PER 1,000 OF POPULATION.										16
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.	No.
9	...	2	11	366	840	·38	·06	2·67	4·90	1·72	4·99	·35	11·64	26·71	33·48	52
4	1	...	6	115	238	·82	...	...	4·78	5·46	4·91	·82	15·70	32·49	53·10	53
2	...	...	4	88	287	·36	·14	...	3·68	3·97	5·92	·29	6·35	20·72	42·46	54
2	2	...	4	57	185	·56	...	·09	5·75	1·48	3·62	·37	5·29	17·16	40·73	55
3	...	...	3	59	149	·65	·22	·97	3·44	1·50	2·58	·32	6·34	16·02	23·01	56
12	...	1	14	392	851	...	·65	·68	5·48	2·38	5·96	·48	13·35	28·98	43·45	57
13	...	...	13	711	2,873	·02	·20	16·90	7·56	1·25	9·05	·21	11·58	46·76	39·35	58
23	...	...	25	422	1,184	...	·56	·20	9·10	5·26	9·10	·82	13·87	38·91	44·04	59
11	...	...	12	220	342	...	...	...	2·74	1·74	5·58	1·10	20·13	31·29	68·15	60
4	...	...	6	50	127	...	·28	...	5·54	1·56	2·70	·85	7·10	18·03	32·36	61
17	...	...	21	305	633	·04	·69	·07	2·68	1·92	5·73	·76	11·06	22·96	38·78	62
8	...	...	12	269	610	...	·58	...	9·60	3·53	5·32	·68	15·55	35·27	53·02	63
4	...	...	5	105	299	...	...	...	9·05	·79	2·56	·33	6·89	19·60	31·41	64
2	...	...	3	232	343	...	...	...	4·89	·68	4·98	·29	22·67	33·52	50·33	65
1	...	...	1	100	182	...	...	...	3·21	·44	·83	·06	5·54	10·09	21·17	66
6	...	1	7	147	325	2·32	·77	...	7·15	3·77	2·51	·68	14·21	31·42	28·13	67
4	...	...	4	114	209	...	...	...	6·41	5·66	5·09	·75	21·49	39·40	39·59	68
3	...	...	3	66	244	2·32	3·96	...	9·83	5·74	2·05	·41	9·01	33·31	23·62	69
1	3	...	5	51	257	1·40	4·34	...	17·50	2·80	2·10	·70	7·14	35·99	24·78	70
19	...	3	25	1,330	3,666	1·22	·04	·05	4·81	1·79	12·23	·22	11·59	31·95	39·05	71
4	...	...	6	107	476	6·00	·06	...	8·26	1·75	6·69	·37	6·69	29·82	25·67	72
3	...	...	3	61	309	1·03	...	...	11·69	·84	9·36	·28	5·70	28·30	40·84	73
9	...	...	12	681	1,779	2·70	...	·02	6·04	·42	15·87	·28	15·71	41·04	43·19	74
4	...	...	4	56	340	·56	...	...	15·57	1·45	13·57	·44	6·23	37·82	46·27	75
3	...	2	5	85	359	·79	...	...	18·87	·97	3·09	·44	7·49	31·65	34·53	76
3	...	...	3	43	264	·14	...	...	8·35	1·78	19·60	·41	5·89	36·17	58·62	77
...	...	...	...	59	177	·63	...	...	14·38	1·42	2·21	...	9·32	27·96	45·46	78
20	3	1	25	188	1,127	·33	...	...	23·17	1·29	8·88	·92	6·92	41·51	54·02	79
11	2	2	17	95	418	...	...	·67	12·48	4·64	8·01	1·43	8·01	35·24	46·59	80
3	...	...	4	22	271	·10	...	...	22·49	·39	1·18	·39	2·17	26·72	42·03	81
10	...	2	13	147	423	·37	...	...	9·67	1·32	7·91	·95	10·76	30·98	46·78	82
1	1	...	2	50	333	5·39	...	...	20·17	3·08	7·45	·26	6·42	42·77	49·51	83
6	...	...	6	102	506	·23	...	...	19·04	1·60	9·45	·46	7·77	38·55	47·63	84
7	...	...	10	157	423	2·71	·09	...	7·74	·14	·90	·45	7·10	19·13	26·05	85
2	...	1	3	60	326	...	·11	...	26·87	·54	·75	·32	6·45	35·04	59·98	86
147	1	13	162	2,968	10,492	·35	·27	·02	10·55	3·47	19·74	·76	13·87	49·03	57·02	87
...	2	...	2	81	290	...	...	...	16·79	2·61	6·34	·25	10·07	36·06	60·84	88
5	...	3	11	183	808	·91	·10	...	21·28	·82	6·46	·52	8·81	38·90	50·52	89
1	3	...	4	94	459	...	...	...	18·48	2·19	5·69	·29	6·87	33·52	58·47	90
...	...	...	...	20	54	...	...	...	13·88	·87	...	...	8·68	23·43	32·71	91

ANNUAL FORM

1	2	3	4			5	6	7	8	9	10	11	12	
			Births.										Inju	
No.	Districts and Towns.	Population according to Census of 1911.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	Karachi District.													
92	Karachi ...	140,511	3,832	3,567	7,399	52·65	5	106	372	2,007	124	1,310	1	...
93	Tatta ...	11,161	83	64	147	13·17	...	11	54	119	4	69	...	...
94	Kotri ...	7,256	80	60	140	19·29	...	...	3	94	10	23	...	...
95	Karachi Cantonment .	6,004	46	57	103	17·15	...	3	...	66	12	...	1	...
	Hyderabad District.													
96	Hyderabad ...	69,140	1,259	1,104	2,363	34·18	2	150	2	774	76	584	...	...
97	Halla ...	5,853	29	19	48	8·20	...	4	15	38	...	...	...	...
98	Matiari ...	6,487	82	68	150	23·12	...	...	...	22	7	72	...	...
99	Hyderabad Cantonment.	5,883	28	26	54	9·18	...	10	...	16	...	...	...	...
	Thar and Parkar District.													
100	Umarkot ...	3,946	55	25	80	20·28	...	...	...	85	...	9	...	...
101	Mirpurkhas ...	4,856	38	21	59	12·15	...	1	...	112	4	48	1	...
	Nawabshah District.													
102	Nawabshah ...	1,886	18	21	39	20·67	...	...	...	23	...	2	...	...
103	Tando Adam ...	10,013	186	152	338	33·76	...	2	1	209	4	28	...	...
	Larkana District.													
104	Larkana ...	16,046	284	263	547	33·88	...	34	2	277	5	27	...	...
105	Kambar ...	6,286	103	73	176	28·00	...	6	...	185	1	6	...	...
106	Ratodero ...	5,411	113	119	232	42·87	...	5	...	139	...	4	...	...
107	Sehwan ...	4,749	67	50	117	24·64	...	...	...	102	2	48	...	...
	Sukkur District.													
108	Sukkur ...	34,916	736	610	1,346	38·55	21	11	1	747	11	47	1	...
109	Shikarpur ...	53,944	908	668	1,576	29·21	...	8	1	1,020	16	71	2	...
110	Rohri ...	9,919	206	184	390	39·32	32	8	...	237	6	29	...	...
111	Gari Yasin ...	6,549	114	97	211	32·22	...	14	...	203	...	1	...	...
	Upper Sind Frontier District.													
112	Jacobabad ...	11,340	138	91	229	20·19	...	12	...	162	3	12	...	...
	Total of Towns ..	3,179,621	46,131	41,755	87,886	27·64	11,552	2,496	4,296	31,514	9,316	44,569	78	41
	Total for the Presidency.	19,587,383	2,85,195	2 61,265	5,46,460	27·90	51,551	6,232	9,626	2,74,759	38,317	98,633	290	278

No. VI—*continued.*

RIES.				13	14	15										16
						Ratio of Deaths per 1,000 of population.										
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.		No.
														For the year.	Mean of previous five years.	
77	1	2	81	3,227	7,232	·04	·75	2·65	14·28	·88	9·32	·58	22·97	51·47	50·51	92
...	...	...	...	76	333	...	·99	4·84	10·66	·36	6·19	...	6·80	29·84	34·30	93
3	...	...	3	18	151	...	...	·42	12·96	1·40	3·18	·42	2·50	20·88	46·36	94
2	...	...	3	241	325	...	·50	...	11·44	2·00	...	·50	40·14	54·58	26·21	95
41	3	1	45	388	2,021	·03	2·17	·03	11·20	1·10	8·45	·65	5·61	29·23	45·65	96
...	...	...	...	...	57	...	·68	2·56	6·49	.....	...	...	...	9·73	25·46	97
1	2	...	3	47	151	...	...	...	3·39	1·07	11·10	·46	7·25	23·27	49·70	98
...	...	...	...	14	40	...	1·70	...	2·72	.....	...	...	2·38	6·80	24·11	99
...	...	...	...	13	107	...	...	...	21·53	.....	2·28	...	3·30	27·11	64·11	100
2	1	...	4	22	191	...	·21	...	23·06	·82	9·89	·82	4·53	39·33	65·40	101
...	...	...	...	...	25	...	...	...	12·20	.....	1·06	...	...	13·26	33·19	102
...	...	...	...	14	258	...	·20	·10	20·67	·40	2·80	...	1·40	25·77	36·69	103
...	...	...	...	165	510	...	2·11	·12	17·16	·31	1·66	...	10·22	31·58	51·29	104
...	...	...	...	14	212	...	·95	...	29·43	·16	·95	...	2·22	33·71	43·59	105
3	...	...	3	13	164	...	·92	...	25·69	.....	·74	·55	2·40	30·30	46·57	106
...	...	...	...	16	168	...	...	...	21·48	·42	10·10	...	3·37	35·37	42·41	107
18	...	...	19	156	1,013	·60	·32	·03	21·39	·32	1·35	·54	4·46	29·01	40·41	108
14	...	...	16	739	1,871	...	·15	·02	18·91	·29	1·29	·32	13·70	34·68	54·22	109
...	1	...	1	37	350	3·22	·81	...	23·89	·60	2·93	·10	3·73	35·28	55·01	110
1	...	...	1	12	231	...	2·14	...	31·00	.....	·15	·15	1·82	35·27	51·85	111
3	...	...	3	35	227	...	1·06	...	14·28	·27	1·06	·27	3·08	20·02	38·63	112
1,617	49	56	1,841	45,652	1,51,236	3·63	·78	1·35	9·91	2·93	14·02	·58	14·36	47·56	42·94	
5,824	1,243	261	7,896	1,50,156	6,37,170	2·63	·32	·49	14·03	1·96	5·04	·40	7·67	32·54	43·55	

ANNUAL FROM No. VI (*a*).—DEATHS *registered from* DIFFERENT CAUSES *in the*

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1911.	Malaria.		Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	A.—DISTRICTS.													
	Western Registration District.													
1	East Khándesh ...	903,053	...	...	...	...	93	·10	...	...	...	...	12,509	13·85
2	West Khándesh ...	538,084	3	·01	...	...	88	·16	...	...	...	...	8,553	15·89
3	Násik ...	813,511	5	·01	...	...	97	·12	...	...	...	...	14,360	17·65
4	Thána ...	791,861	428	·54	...	...	18	·02	...	...	...	...	20,357	25·71
5	Kolába ...	567,043	47	·08	1	...	60	·11	...	...	...	...	12,119	21·37
	Central Registration District.													
6	Ahmednagar ...	888,096	3,094	3·48	1	...	120	·14	...	...	...	...	6,923	7·80
7	Poona ...	859,267	5,458	6·35	...	...	194	·23	...	...	...	...	8,265	9·62
8	Sholápur ...	660,338	390	·59	2	...	229	·35	...	...	...	...	6,843	10·36
9	Sátára ...	1,025,700	375	·37	20	·02	325	·32	...	...	...	...	13,345	13·01
10	Ratnágiri ...	1,136,710	276	·24	1	...	51	·04	...	...	...	...	15,582	13·71
	Southern Registration District.													
11	Belgaum ...	869,243	1,843	2·12	314	·36	270	·31	...	...	...	...	2,324	2·67
12	Dhárwár ...	885,871	1,703	1·92	466	·53	419	·47	...	...	...	...	6,189	6·99
13	Bijápur ...	792,582	2,537	3·20	142	·18	241	·30	...	...	...	...	6,384	8·05
14	Kánara ...	382,278	1,932	5·05	237	·62	2	·01	...	...	...	...	2,036	5·33
	Gujarat Registration District.													
15	Surat ...	512,580	16	·03	...	...	15	·03	...	...	...	...	7,007	13·67
16	Broach ...	242,979	2	·01	...	...	97	·40	...	...	...	...	4,851	19·96
17	Kaira ...	594,309	1	...	...	...	277	·46	...	...	...	...	4,974	8·38
18	Panch Mahals ...	291,248	8	·03	...	...	36	·12	...	...	...	...	4,229	14·52
19	Ahmedabad ...	568,530	26	·04	...	...	193	·34	...	...	...	...	9,443	16·61
	Sind Registration District.													
20	Karáchi ...	351,401	616	1·75	178	·51	13	·04	...	...	...	...	3,874	11·02
21	Hyderabad ...	523,747	385	·74	27	·05	14	·03	...	...	...	...	10,592	20·22
22	Thar and Párkar ...	424,563	1,186	2·79	25	·06	114	·27	...	...	...	...	7,224	17·02
23	Nawábshah ...	436,579	504	1·15	136	·31	31	·07	...	...	...	...	7,635	17·49
24	Lárkana ...	628,336	545	·87	124	·20	22	·04	...	...	...	...	9,915	15·77
25	Sukkur ...	468,207	1,366	2·91	10	·02	36	·08	...	...	...	...	5,960	12·73
26	Upper Sind Frontier ...	251,646	345	1·37	7	·03	13	·05	...	...	...	...	4,145	16·48
	Total of Districts ...	16,407,762	23,391	1·41	1,691	·10	3,068	·19	...	...	...	...	215,638	13·14
	B.—TOWNS.													
	East Khandesh District.													
1	Jalgaon ...	17,195	...	...	...	...	17	·99	...	...	...	...	86	5·00
2	Bhusáwal ...	18,312	...	...	...	...	5	·27	...	...	...	...	161	8·79
3	Chopda ...	17,008	...	...	...	...	2	·12	...	...	...	...	101	5·94
4	Dharangaon ...	15,607	...	...	...	...	2	·13	...	...	...	...	86	5·51
5	Parola ...	14,177	...	...	...	...	2	·14	...	...	...	...	87	6·13
6	Amálner ...	13,232	...	...	...	...	1	·08	...	...	...	...	98	7·40
7	Erandol ...	13,144	...	...	...	...	...	...	...	...	...	...	129	9·81
8	Nasirabad ...	13,033	...	...	...	...	...	...	...	...	...	...	64	4·91
9	Chálisgaon ...	9,453	...	...	...	...	...	...	...	...	...	...	124	13·10
	West Khandesh District.													
10	[illegible]ulia ...	30,757	1	·03	...	...	2	·06	...	...	...	...	104	3·38
11	Nandurbar ...	11,839	...	...	...	...	3	·16	...	...	...	...	137	11·57
	Nasik District.													
12	Násik ...	33,163	...	...	...	...	24	·72	...	...	...	...	311	9·38
13	Yeola ...	16,275	...	...	...	...	10	·61	...	...	...	...	247	15·18

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1919.*

10		11		12		13		14		15	16			17	18
Dysentery.		Diarrhœa.		Pneumonia.		Phthisis.		Other Respiratory Diseases.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
64	·07	1,496	1·66	4	...	118	·13	3,681	4·08	286	3,658	3,061	6,719	173·76	1
43	·08	411	·76	...	...	116	·21	1,695	3·15	102	1,908	1,742	3,650	176·12	2
29	·04	1,689	2·08	13	·02	170	·21	3,934	4·84	189	2,894	2,539	5,433	214·32	3
189	·24	856	1·08	35	·04	497	·63	665	·84	155	1,541	1,388	2,929	171·71	4
238	·42	912	1·61	15	·03	1,043	1·84	373	·65	172	1,573	1,273	2,846	200·33	5
1	...	3,132	3·53	19	·02	189	·21	3,841	4·32	2	2,582	2,204	4,786	182·57	6
60	·07	3,021	3·52	285	·33	537	·62	3,177	3·70	81	2,386	1,879	4,265	186·92	7
39	·06	1,913	2 90	104	·16	192	·29	1,030	1·56	8	1,899	1,643	3,542	167·45	8
28	·03	2,578	2·51	41	·04	439	·43	1,144	1·11	...	2,720	2,338	5,058	158·61	9
73	·06	1,511	1·33	118	·10	2,686	2·36	2,358	2·07	73	1,599	1,479	3·078	107·67	10
188	·22	2,624	3·02	36	·04	521	·60	1·800	2·07	136	2,264	1,932	4,196	140·15	11
410	·46	896	1·01	35	·04	583	·66	1,917	2·16	132	2,472	2,113	4,585	163·71	12
422	·53	2,234	2·82	186	·23	424	·53	1,901	2·40	124	2,037	1,660	3,697	155·54	13
422	1·10	792	2·07	39	·10	240	·63	296	·77	196	1,250	1,086	2,336	212·09	14
153	·30	382	·74	1,023	2·00	575	1·12	3,556	6·93	11	1,871	1,632	3,503	193·42	15
33	·14	261	1·07	389	1·60	192	·79	1,268	5·22	12	1,354	1,266	2,620	252·53	16
170	·29	571	·96	186	·31	861	1·45	3,907	6·58	13	1,635	1,657	3,292	173·11	17
18	·06	335	1·15	63	·22	156	·53	571	1·96	57	831	777	1,608	156·24	18
211	·37	388	·68	402	·71	790	1·39	1,703	2·99	19	1,790	1,524	3,314	175·20	19
4	·01	15	·04	47	·13	26	·07	15	·04	31	358	340	698	248·49	20
12	·02	22	·04	383	·73	37	·07	72	·14	98	731	654	1,385	182·43	21
16	·04	16	·04	359	·85	14	·03	114	·27	45	411	345	756	152·27	22
13	·03	17	·04	313	·72	22	·05	36	·08	107	552	428	980	163·61	23
8	·01	28	·04	285	·45	17	·03	10	·02	70	849	763	1,612	165·62	24
13	·03	32	·07	102	·22	19	·04	18	·04	115	763	704	1,467	184·25	25
3	·01	9	·04	24	·09	7	·03	5	·02	19	404	315	719	164·57	26
2,860	·17	26,141	1·59	4,506	·27	10,471	·64	39,087	2·38	2,253	42,332	36,742	79,074	172·43	
2	·12	27	1·57	4	·23	33	1·92	52	3·02	15	55	51	106	216·33	1
2	·11	15	·82	2	·11	7	·38	71	3·88	22	59	42	101	190·93	2
1	·06	19	1·12	...	...	2	·12	59	3·47	10	38	26	64	125·98	3
...	...	26	1·67	...	...	5	·32	64	4·10	9	27	31	58	146·10	4
...	...	32	2·25	...	...	1	·09	43	3·03	6	43	57	100	251·26	5
...	...	5	·38	...	...	2	·15	70	5·29	9	30	14	44	122·91	6
...	...	12	·91	...	...	40	3·04	23	1·75	10	59	44	103	223·43	7
...	...	37	2·84	...	...	...	...	71	5·45	3	35	37	72	140·90	8
...	...	3	·32	1	·10	1	·10	62	6·56	2	32	27	59	179·33	9
1	·03	30	·97	11	·35	47	1·52	162	5·26	11	77	37	114	120·7[illegible]	10
...	...	15	1·26	...	...	3	·16	53	4·47	7	32	30	62	170·80	11
36	1·09	139	4·19	10	·30	117	3·52	200	6·03	26	108	90	198	253·20	12
...	...	26	1·60	1	·06	25	1·53	110	6·76	16	46	44	90	248·62	13

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1911.	Malaria.		Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Nasik District—continued.													
14	Málegaon ...	19,542	...	...	...	...	...	...	...	...	...	...	241	12·33
15	Igatpuri ...	8,380	...	...	...	...	...	...	...	...	...	...	67	7·99
16	Manmad ...	6,947	...	...	...	...	...	...	...	...	...	...	80	11·51
17	Trimbak ...	4,078	...	...	...	...	1	·25	...	...	...	...	45	11·03
18	Deolali Cantonment ...	1,748	4	2·29	...	...	...	...	...	...	...	...	3	1·72
	Thana District.													
19	Thána ...	15,591	...	...	...	...	...	...	...	...	...	...	290	18·60
20	Bandra ...	22,885	7	·31	...	...	9	·39	...	....	...	...	88	3·86
21	Kurla ...	15,081	...	...	...	...	5	·33	...	...	...	...	460	30·50
22	Bhiwandi ...	13,292	...	...	...	...	3	·23	...	...	...	...	101	7·60
23	Kalyán ...	12,600	..	...	...	...	2	·16	...	...	...	...	144	11·43
24	Bassein ...	9,598	1	·10	...	...	...	...	...	...	...	...	97	10·11
	Kolaba District.													
25	Alibág ...	3,358	...	...	...	...	1	·29	...	...	...	...	33	9·83
26	Panvel ...	7,744	...	...	...	....	...	...	...	...	...	...	89	11·49
27	Mahád ...	7,164	...	...	...	...	...	...	...	...	...	...	80	11·17
28	Uran ...	8,748	...	...	....	...	1	·11	...	...	...	...	84	9·60
29	City of Bombay ...	963 363	246	·25	116	·12	560	·58	152	·15	3	...	5,061	5·24
	Ahmednagar District.													
30	Ahmednagar ...	33,878	26	·77	...	...	15	·45	...	...	...	...	109	3·22
31	Sangamner ...	14,269	3	·21	...	...	1	·07	...	...	...	...	141	9·78
32	Ahmednagar Cantonment ...	7,748	3	·39	...	...	...	...	...	...	...	...	30	3·87
	Poona District.													
33	Poona ...	126,201	546	4·33	276	2·19	258	2·04	...	...	....	...	848	6·71
34	Baramati ...	10,190	11	1·08	1	·10	8	·78	...	...	...	...	7	·69
35	Khed ...	8,056	32	3·97	...	...	2	·25	...	....	...	...	36	4·47
36	Lonávala ...	12,295	97	7·89	...	...	3	·24	...	...	...	...	35	2·85
37	Junnar ...	8,800	6	·68	...	...	7	·79	...	...	...	...	76	8·62
38	Poona Cantonment ...	30,958	...	...	1	·03	2	·06	...	...	...	...	173	5·59
39	Kirkee do. ...	9,019	3	·34	3	·34	...	...	...	...	...	...	20	2·22
	Sholapur District.													
40	Sholápur ...	61,032	2	·03	...	...	70	1·15	...	...	...	...	1,743	28·56
41	Bársi ...	18,097	...	...	...	...	7	·39	...	...	...	...	431	23·82
42	Pandharpur ...	28,550	1	·03	...	...	64	2·24	...	...	...	...	609	21·33
	Satara District.													
43	Sátára ...	18,665	1	·05	...	...	8	·43	...	...	...	...	202	10·82
44	Wái ...	7,280	2	·27	2	·27	...	...	...	...	...	...	80	10·99
45	Karád ...	11,228	...	...	...	...	1	·09	...	...	...	...	55	4·90
46	Ashta ...	9,351	...	...	3	·32	...	...	...	...	...	...	80	8·56
47	Islámpur ...	8,574	...	...	...	...	...	...	...	...	....	...	21	2·45
	Ratnagiri District.													
48	Ratnágiri ...	15,822	3	·19	...	...	3	·19	...	...	...	...	100	6·32
49	Vengurla ...	17,294	7	·41	...	...	...	...	...	...	...	...	165	9·54
50	Málwan ...	22,080	5	·23	...	...	...	...	...	...	...	...	278	12·59
51	Chiplun ...	11,696	...	...	...	...	2	·17	...	...	...	...	84	7·18
	Belgaum District.													
52	Belgaum ...	31,451	18	·57	5	·16	19	·60	...	...	...	...	112	3·56
53	Gokák ...	7,326	3	·41	14	1·91	...	...	...	..	...	...	18	2·46
54	Athni ...	13,849	10	·72	...	...	...	...	...	...	...	...	41	2·96
55	Nipáni ...	10,779	11	1·02	3	·28	...	...	...	...	...	...	48	4·45
56	Belgaum Cantonment ...	9,300	1	·11	...	...	...	...	...	...	...	...	31	3·33

No. VI (*a*)—*continued.*

10 Dysentery.		11 Diarrhœa.		12 Pneumonia.		13 Phthisis.		14 Other Respiratory diseases.		15 Deaths from child birth.	16 Deaths under 1 year.			17 Infant mortality rate per 1,000 births.	18 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
...	...	41	2·09	...	...	6	·31	67	3·43	60	93	58	151	163·95	14
...	...	4	·48	3	·36	2	·24	47	5·61	13	18	9	27	99·63	15
1	·14	12	1·73	...	...	18	2·59	14	2·01	2	11	14	25	171·23	16
...	...	5	1·23	...	...	9	2·21	28	6·87	...	10	14	24	252·53	17
3	1·72	7	4·00	32	18·31	11	6·29	15	8·58	1	14	12	26	1,181·82	18
5	·37	57	4·29	34	2·56	59	4·44	23	1·73	10	72	35	107	217·48	19
24	1·05	66	2·88	77	3·37	52	2·27	57	2·49	...	71	61	132	274·43	20
40	2·65	5	·33	3	·20	9	·60	20	1·33	...	25	29	54	248·85	21
22	·15	31	2·33	12	·90	45	3·38	11	·83	10	23	20	43	172·40	22
27	2·14	...	...	34	2·70	23	1·83	11	·87	10	13	8	21	116·02	23
8	·62	6	·62	7	·73	19	1·98	11	1·14	10	29	20	49	196·00	24
1	·29	7	2·09	...	...	26	7·74	5	1·49	3	12	6	18	191·49	25
1	·13	5	·65	...	...	28	3·61	2	·51	10	6	6	12	164·38	26
3	·42	9	1·26	...	...	10	1·39	1	·14	7	11	3	14	134·61	27
2	·23	20	2·29	...	...	10	1·14	9	1·03	4	11	12	23	239·58	28
1,561	1·62	2,852	2·96	14,736	15·29	2,466	2·54	9,231	9·58	Not available	7,065	6,391	13,456	657·19	29
9	·27	67	1·98	95	2·80	128	3·78	217	6·41	...	91	64	155	292·45	30
...	...	16	1·12	...	...	7	·49	24	1·68	...	14	13	27	90·60	31
...	...	29	3·74	6	·77	6	·77	89	11·49	...	12	5	17	68·00	32
191	1·51	517	4·10	1,481	11·74	594	4·71	751	5·95	...	900	711	1,611	609·53	33
1	·10	26	2·55	20	1·96	28	2·75	15	1·47	4	41	19	60	183·48	34
4	·50	33	4·10	12	1·49	3	·37	8	·99	...	11	12	23	196·58	35
...	...	25	2·03	8	·65	11	·90	26	2·11	...	22	19	41	210·26	36
1	·11	6	·68	...	...	17	1·93	4	·45	...	5	3	8	75·47	37
23	·74	8	·26	16	·52	48	1·56	108	3·49	7	46	33	79	711·71	38
34	3·77	9	1·00	54	5·98	23	2·55	61	6·76	...	49	27	76	622·95	39
3	·05	271	4·44	38	·62	85	1·39	254	4·16	...	582	455	1,037	356·85	40
...	...	91	5·03	...	...	3	·17	28	1·54	...	116	74	190	319·93	41
11	·39	183	6·41	6	·21	30	1·05	101	3·54	...	216	188	404	613·05	42
...	...	47	2·52	1	·05	105	5·63	33	1·77	...	55	36	91	302·33	43
1	·14	5	·69	1	·14	15	2·06	11	1·51	...	7	9	16	91·95	44
...	...	6	·53	...	...	1	·09	6	·53	...	6	11	17	139·34	45
...	...	10	1·07	...	...	1	·11	2	·21	...	6	3	9	54·22	46
...	...	11	1·28	...	...	16	1·87	29	3·38	...	11	10	21	102·94	47
1	·06	28	1·78	...	...	48	3·03	13	·82	2	14	8	22	84·29	48
6	·35	13	·75	9	·52	42	2·43	49	2·83	...	35	16	51	94·80	49
1	·05	53	2·40	1	·05	51	2·31	32	1·45	1	42	29	71	136·54	50
...	...	5	·43	...	...	24	2·05	34	2·91	1	7	8	15	72·11	51
36	1·14	18	·57	21	·67	84	2·67	52	1·65	2	46	34	80	108·70	52
5	·68	35	4·77	1	·14	24	3·28	11	1·50	1	22	26	48	161·62	53
...	...	55	3·97	...	...	27	1·94	55	3·97	1	29	22	51	138·96	54
...	...	16	1·48	...	...	8	·74	31	2·88	1	17	10	27	97·12	55
3	·32	11	1·18	9	·97	2	·21	13	1·40	2	8	11	19	558·82	56

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1911.	Malaria.		Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Dharwar District.													
57	Dhárwár ...	29,370	11	·37	7	·24	42	1·43	...	...	...	...	101	3·44
58	Hubli ...	61,440	155	2·54	117	1·90	84	1·37	...	...	...	...	109	1·77
59	Gadag Bettigeri ...	30,429	117	3·84	8	·26	93	3·06	...	...	...	...	59	1·94
60	Ránebennur ...	10,931	4	·36	6	·55	9	·83	...	...	...	...	11	1·01
61	Nawalgund ...	7,045	5	·71	...	...	...	...	...	...	...	...	34	4·83
	Bijapur District.													
62	Bijápur ...	27,569	31	1·12	8	·29	15	·54	...	...	...	...	20	·73
63	Bágalkot ...	17,294	26	1·50	1	·06	13	·75	...	...	...	...	126	7·29
64	Guledgudh ...	15,249	38	2·49	2	·13	10	·66	...	...	...	...	88	5·77
65	Ilkal ...	10,233	40	3·91	...	...	2	·20	...	...	...	...	8	·78
	Kanara District.													
66	Kárwár ...	18,045	2	·11	...	...	...	...	...	...	...	...	56	3·10
67	Kumta ...	10,343	62	6·00	4	·39	...	...	...	...	...	...	8	·78
68	Gokarn ...	5,304	2	·38	2	·38	...	...	...	...	...	...	30	5·66
69	Honáwar ...	7,323	19	2·60	6	·82	...	...	...	...	...	...	47	6·42
70	Bhatkal ...	7,141	...	...	...	...	...	...	...	...	...	...	125	17·50
	Surat District.													
71	Surat ...	1,14,733	355	3·10	14	·12	181	1·58	...	...	...	...	2	·01
72	Bulsar ...	15,972	49	3·07	...	...	...	...	...	...	...	...	83	5·19
73	Ránder ...	10,689	...	...	...	...	...	...	...	...	...	...	125	11·69
	Broach District.													
74	Broach ...	43,353	27	·62	...	...	224	5·17	...	...	...	...	11	·25
75	Jambusar ...	8,991	99	11·01	...	...	20	2·22	...	...	...	...	21	2·34
76	Ankleshwar ...	11,344	...	...	...	...	29	2·56	...	...	...	...	185	16·31
	Kaira District.													
77	Kaira ...	7,297	...	...	...	...	...	...	...	...	...	...	61	8·35
78	Mehmedabad ...	6,330	1	·16	...	...	...	...	...	...	...	...	90	14·22
79	Nadiád ...	27,145	...	...	...	...	110	4·05	...	...	...	...	519	19·12
80	Borsad ...	11,860	...	...	...	...	...	...	...	...	...	...	148	12·48
81	Anand ...	10,139	...	...	...	...	...	...	...	...	...	...	228	22·49
82	Umreth ...	13,651	...	...	...	...	...	...	...	...	...	...	132	9·67
83	Dákore ...	7,785	...	...	...	...	11	1·41	...	...	...	...	146	18·76
84	Kapadvanj ...	13,126	171	13·03	12	·91	37	2·82	...	...	...	...	30	2·28
	Panch Mahals District.													
85	Godhra ...	22,102	...	...	...	...	1	·05	...	...	...	...	170	7·69
86	Dohad ...	9,303	17	1·83	...	...	12	1·29	...	...	...	...	221	23·75
	Ahmedabad District.													
87	Ahmedabad ...	2,14,000	...	...	...	...	764	3·57	...	...	...	...	1,494	6·98
88	Dhandhuka ...	8,040	...	...	...	...	...	...	...	...	...	...	135	16·79
89	Viramgaon ...	20,769	...	...	...	...	62	2·99	...	...	...	...	380	18·29
90	Dholka ...	13,693	156	11·40	...	...	31	2·26	...	...	...	...	66	4·82
91	Ahmedabad Cantonment ...	2,305	...	...	...	...	...	...	...	...	...	...	32	13·88
	Karachi District.													
92	Karáchi ...	1,40,511	...	...	41	·29	202	1·44	...	...	...	...	1,966	13·99
93	Tatta ...	11,161	53	4·75	...	...	...	...	...	...	...	...	66	5·91
94	Kotri ...	7,256	19	2·62	1	·14	2	·28	...	...	...	...	74	10·20
95	Karáchi Cantonment ...	6,004	...	...	...	...	...	...	...	...	...	...	66	11·44

No. VI (*a*)—*continued.*

10 Dysentery.		11 Diarrhœa.		12 Pneumonia.		13 Phthisis.		14 Other Respiratory diseases.		15 Deaths from child birth.	16 Deaths under 1 year.			17 Infant mortality rate per 1,000 births.	18 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
54	1·84	16	·54	16	·54	33	1·12	126	4·29	4	69	65	134	146·57	57
3	·05	74	1·20	7	·11	128	2·08	421	6·85	26	143	109	252	138·77	58
47	1·54	113	3·71	101	3·30	28	·92	148	4·86	...	133	119	252	223·65	59
18	1·65	1	·09	...	...	37	3·38	24	2·20	3	52	35	87	200·00	60
...	...	11	1·56	...	...	10	1·42	9	1·28	2	4	6	10	67·11	61
13	·47	40	1·45	5	·18	52	1·88	101	3·66	3	49	39	88	140·14	62
20	1·15	41	2·37	...	...	36	2·08	56	3·24	1	74	52	126	330·71	63
...	...	12	·78	3	·20	3	·20	33	2·16	4	21	16	37	97·11	64
...	...	7	·68	...	...	33	3·22	18	1·76	...	36	26	62	243·14	65
5	·28	3	·17	...	...	6	·33	9	·50	...	11	11	22	67·28	66
15	1·45	24	2·32	...	...	8	·78	18	1·74	5	39	26	65	212·42	67
24	4·52	6	1·13	6	1·13	13	2·45	8	1·51	2	20	13	33	157·89	68
17	2·32	25	3·40	...	...	8	1·09	7	·96	3	15	17	32	164·10	69
8	1·12	12	1·68	...	...	2	·28	13	1·82	...	20	23	43	195·45	70
64	·56	141	1·23	630	5·49	385	3·36	388	3·38	44	467	461	928	328·61	71
15	·94	13	·81	15	·94	34	2·12	58	3·63	...	43	23	66	146·02	72
6	·56	3	·28	2	·19	26	2·43	72	6·74	2	31	46	77	270·17	73
5	·12	13	·30	87	2·01	201	4·63	400	9·23	...	198	169	367	242·72	74
12	1·34	1	·11	7	·78	14	1·56	101	11·23	...	57	48	105	254·85	75
9	·79	2	·18	2	·18	17	1·50	16	1·41	1	53	51	104	261·31	76
7	·96	6	·82	3	·41	24	3·29	116	15·90	...	17	29	46	261·36	77
3	·47	6	·95	...	...	7	1·11	7	1·11	1	24	28	52	309·52	78
1	·04	34	1·25	120	4·42	50	1·84	71	2·62	8	148	152	300	312·17	79
1	·08	54	4·56	...	...	...	...	95	8·01	1	52	41	93	194·97	80
3	·29	1	·10	...	...	2	·20	10	·98	...	28	37	65	208·33	81
2	·15	16	1·17	1	·07	15	1·10	92	6·74	...	59	51	110	193·66	82
14	1·80	10	1·28	2	·26	19	2·44	37	4·75	...	27	47	74	302·04	83
8	·61	13	·99	16	1·22	54	4·11	54	4·11	...	56	61	117	209·68	84
1	·05	2	·09	...	...	16	·72	4	·18	...	43	33	76	167·40	85
...	...	5	·54	...	...	...	...	7	·75	...	56	44	100	193·42	86
180	·84	563	2·63	272	1·27	1,223	5·71	2,730	12·76	...	1,610	1,471	3,081	362·51	87
10	1·24	11	1·37	5	·62	15	1·87	31	3·85	...	32	36	68	242·04	88
3	·14	14	·68	22	1·06	47	2·27	65	3·13	5	97	85	182	319·30	89
18	1·31	12	·88	4	·29	29	2·11	45	3·29	...	60	62	122	236·89	90
2	·87	...	...	...	...	...	...	...	...	...	4	4	8	25[illegible]	91
35	·25	89	·63	339	2·41	261	1·86	710	5·05	133	1,041	934	1,975	266·92	92
3	·27	1	·09	34	3·05	35	3·14	...	...	14	29	22	51	346·94	93
6	·84	4	·56	11	1·52	10	1·38	2	·28	11	17	13	30	214·29	94
10	1·67	2	·33	...	...	...	...	...	...	...	8	8	16	155·34	95

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1911.	Malaria.		Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Hyderabad District.													
96	Hyderabad ...	69,140	687	9·94	71	1·03	31	·45	...	...	...	...	16	·23
97	Halla ...	5,853	11	1·88	...	...	...	...	...	...	...	...	27	4·61
98	Matiari ...	6,487	14	2·16	...	...	...	...	...	...	...	...	8	1·23
99	Hyderabad Cantonment ...	5,883	...	...	...	...	...	...	...	...	...	...	16	2·72
	Thar and Parkar District.													
100	Umarkot ...	3,946	7	1·77	...	...	1	·25	...	...	...	...	78	19·76
101	Mirpurkhas ...	4,856	36	7·41	...	...	10	2·06	...	...	...	...	76	15·65
	Nawabshah District.													
102	Nawábsháh ...	1,886	...	...	...	...	...	...	...	...	...	...	23	12·20
103	Tando Adam ...	10,013	64	6·39	5	·50	1	·10	...	...	...	...	140	13·78
	Larkana District.													
104	Lárkána ...	16,046	...	...	...	...	3	·19	...	...	...	...	277	17·16
105	Kambar ...	6,286	2	·32	19	3·02	1	·16	...	...	...	...	164	26·09
106	Ratodero ...	5,411	...	...	...	...	...	...	...	...	...	...	179	33·09
107	Sehwan ...	4,749	...	...	...	...	1	·21	...	...	...	...	102	21·48
	Sukkur District.													
108	Sukkur ...	34,916	51	1·46	...	...	13	·37	...	...	...	...	696	19·93
109	Shikárpur ...	53,944	201	3·73	310	5·75	71	1·32	...	...	...	...	509	9·43
110	Rohri ...	9,919	...	...	...	...	...	...	...	...	...	...	237	23·89
111	Garhi Yasin ...	6,549	168	25·65	...	...	5	·75	...	...	...	...	35	5·35
	Upper Sind Frontier.													
112	Jacobabad ...	11,340	...	...	...	...	...	...	...	...	...	...	162	14·28
	Total of Towns ...	3,179,621	3,750	1·18	1,058	·33	3,211	1·01	152	·05	3	...	24,245	7·63
	Total for the Presidency ...	19,587,383	26,841	1·37	2,749	·14	6,279	·32	152	·01	3	...	2,39,807	12·25

N.B.—Districts A in this Statement do not include the population or deaths of

No. VI (*a*).—*continued.*

10 Dysentery.		11 Diarrhœa.		12 Pneumonia.		13 Phthisis.		14 Other Respiratory diseases.		15 Deaths from child birth.	16 Deaths under 1 year.			17 Infant mortality rate per 1,000 births.	18 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
25	·36	51	·74	125	1·81	299	4·32	160	2·31	55	302	278	580	245·45	96
...	...	...	...	...	...	...	...	...	...	...	3	...	3	62·50	97
1	·15	6	·92	62	9·56	5	·77	5	·77	9	21	10	31	206·67	98
...	...	...	...	...	...	...	...	...	...	...	5	5	10	185·19	99
...	...	...	...	7	1·77	...	...	2	·51	1	8	6	14	175·00	100
3	·61	1	·21	28	5·77	4	·82	16	3·30	12	12	19	31	525·42	101
...	...	...	...	1	·53	1	·53	...	...	...	4	...	4	102·56	102
1	·10	3	·30	22	2·20	3	·30	3	·30	8	19	22	41	121·30	103
	·06	4	·25	12	·74	7	·43	8	·49	71	86	100	186	340·04	104
...	...	1	·16	6	·95	...	...	...	...	10	25	24	49	278·41	105
...	...	...	...	2	·37	...	...	2	·37	22	25	24	49	211·21	106
...	...	2	·42	42	8·84	6	1·26	...	...	4	21	21	42	358·97	107
2	·06	9	·26	29	·83	6	·17	12	·35	43	151	124	275	203·57	108
4	·07	12	·22	45	·83	5	·09	21	·37	101	339	322	661	419·42	109
2	·20	4	·40	17	1·71	9	·91	3	·31	27	42	41	83	212·82	110
...	...	...	...	...	...	...	...	1	·15	6	38	27	65	308·06	111
1	·09	2	·18	9	·79	3	·27	...	...	14	39	36	75	327·51	112
2,730	·86	6,603	2·08	18,863	5·93	7,736	2·43	18,984	5·97	964	16,618	14,656	31,274	355·84	
5,590	·28	32,744	1·67	23,369	1·19	18,207	·93	58,071	2·96	3,217	58,950	51,398	1,10,348	201·93	

Towns B. In all other Statements "Districts" include Towns.

ANNUAL FORM No. VII.—DEATHS *registered from* CHOLERA *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1919.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from cholera were reported.	Number in each District.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	22	20	1,438	184	75	23	20	16	20	143	1,052	432	65	9	...	2	942	915	1,857	1·81	1·78	1·80	·74	1
2	West Khándesh ...	10	10	1,096	250	202	122	49	118	18	109	917	919	102	16	3	...	1,275	1,300	2,575	4·34	4·52	4·43	·98	2
3	Násik	19	18	1,649	352	10	9	15	24	665	953	1,709	620	16	4	...	...	1,984	2,041	4,025	4·36	4·54	4·45	·76	3
4	Thána	18	18	1,643	454	121	560	624	943	1,515	1,135	1,008	417	62	21	29	...	3,274	3,191	6,465	7·17	7·52	7·34	·41	4
5	Kolába	14	14	1,461	596	501	1,137	455	419	443	754	2,668	1,466	228	100	16	...	4,080	4,107	8,187	13·82	13·74	13·78	·56	5
6	City of Bombay ...	1	1	1	1	5,577	2,594	23	36	18	23	71	57	10	...	1	...	5,318	3,102	8,420	8·44	9·30	8·74	·43	6
	Central Registration District.																								
7	Ahmednagar	15	14	1,348	279	1	...	2	71	454	716	984	1,142	237	129	17	2	1,923	1,832	3,755	4·05	3·91	3·98	1·11	7
8	Poona	18	18	1,201	304	22	32	16	170	551	485	1,665	647	112	35	13	9	1,986	1,771	3,757	3·69	3·36	3·53	·88	8
9	Sholápur	10	10	718	151	2	12	83	401	436	255	625	155	8	...	...	...	1,116	861	1,977	2·85	2·29	2·57	1·18	9
10	Sátára	19	19	1,346	267	...	...	...	127	930	541	470	230	40	5	2	...	1,232	1,113	2,345	2·29	2·13	2·17	1·02	10
11	Ratnágiri	15	15	1,311	231	239	314	129	25	17	24	409	482	271	118	161	66	979	1,276	2,255	1·77	1·96	1·87	·15	11
	Southern Registration District.																								
12	Belgaum	15	12	1,070	39	...	6	1	1	58	105	43	49	2	2	...	...	138	129	267	·26	·28	·28	1·65	12
13	Dhárwár	18	6	1,295	6	6	1	...	1	...	1	...	...	...	...	...	1	6	4	10	·01	·01	·01	1·10	13
14	Bijápur...	13	7	1,122	43	1	...	...	18	42	41	34	62	22	27	...	...	143	154	297	·33	·36	·34	1·54	14
15	Kánara...	16	7	1,265	29	104	37	80	...	...	...	...	...	13	...	...	...	119	115	234	·54	·55	·54	·23	15
	Gujarát Registration District.																								
16	Surat	12	12	760	255	12	2	58	175	465	936	796	134	17	...	8	4	1,221	1,386	2,607	3·74	4·24	3·99	·09	16
17	Broach...	9	9	409	131	18	3	17	313	349	145	104	9	1	...	...	...	496	463	959	3·13	3·12	3·13	·21	17
18	Kaira	15	13	586	55	...	...	...	3	22	2	117	478	28	...	...	...	327	323	650	·88	1·00	·94	·35	18
19	Panch Mahals ...	7	6	660	53	...	...	...	...	26	104	169	136	44	...	...	...	246	233	479	1·48	1·49	1·48	·15	19
20	Ahmedabad	13	6	880	9	...	2	...	...	5	3	20	67	15	1	1	...	54	60	114	·12	·15	·14	·09	20
	Sind Registration District.																								
21	Karáchi	16	1	665	1	1	1	1	...	...	...	2	...	...	...	...	...	5	...	5	·03	...	·02	·32	21
22	Hyderabad	11	1	864	1	...	...	...	...	...	...	...	...	1	1	...	...	2	...	2	·00	...	·00	·11	22
23	Thar and Párkar ...	13	...	901	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
24	Nawábsháh	9	3	721	5	...	...	...	...	...	...	8	8	...	...	...	...	12	4	16	·05	·02	·04	·02	24
25	Lárkána	15	4	737	10	...	...	...	...	...	...	105	1	...	...	...	...	63	43	106	·18	·14	·17	·03	25
26	Sukkur...	12	7	684	24	...	...	...	6	26	·37	32	22	10	...	...	...	99	84	183	·32	·32	·32	·19	26
27	Upper Sind Frontier .	6	2	422	3	...	...	...	...	...	1	3	...	...	...	...	...	4	...	4	·03	...	·02	·05	27
	Total for the Presidency.	361	253	26,253	3,733	6,892	4,855	1,573	2,867	6,060	6,523	13,111	7,563	1,304	468	251	84	27,044	24,507	51,551	2·65	2·61	2·63	·65	

ANNUAL FORM No. VIII.—DEATHS *registered from* SMALL-POX *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1919.*

1	2	3		4		5												6			7		8			9	10
No	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			NUMBER OF THESE DEATHS AMONG CHILDREN.		TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Under 1 year.	Under 10 years.	Male.	Female.	Total.		
	Western Registration District.																										
1	East Khándesh ...	22	13	1,438	104	37	35	42	47	45	24	19	9	2	1	3	...	124	140	264	75	163	·24	·27	·25	·45	1
2	West Khándesh ...	10	9	1,096	187	73	84	97	84	77	42	13	17	13	6	2	2	267	243	510	115	279	·91	·88	·88	·75	2
3	Násik	19	18	1,649	165	67	68	89	64	73	49	26	13	2	8	6	4	250	219	469	178	218	·53	·51	·52	·31	3
4	Thána	18	15	1,643	58	18	39	41	67	47	18	17	12	...	1	2	6	131	137	268	42	160	·29	·32	·30	·22	4
5	Kolába	14	12	1,461	37	2	4	3	15	11	17	10	8	7	3	4	2	42	44	86	21	45	·14	·15	·14	·41	5
6	City of Bombay ...	1	1	1	1	23	57	155	199	163	95	43	10	9	7	5	5	439	332	771	198	258	·70	·99	·80	·59	6
	Central Registration District.																										
7	Ahmednagar	15	13	1,348	70	20	44	52	23	27	5	11	3	1	1	...	2	94	95	189	50	109	·20	·20	·20	·16	7
8	Poona	18	16	1,201	68	31	48	87	72	58	23	14	5	10	5	7	18	183	195	378	101	219	·34	·37	·35	·22	8
9	Sholápur	10	10	718	83	179	223	196	105	48	25	17	23	2	3	6	3	428	402	830	221	485	1·09	1·07	1·08	·21	9
10	Sátára	19	14	1,346	62	11	12	20	33	20	19	10	1	3	2	3	...	77	57	134	24	43	·14	·11	·12	·05	10
11	Ratnágiri	15	15	1,311	66	4	12	27	24	23	22	12	1	4	1	1	1	69	63	132	22	49	·12	·10	·11	·24	11
	Southern Registration District.																										
12	Belgaum	15	13	1,070	75	8	12	22	16	11	28	17	13	12	7	13	24	95	88	183	43	68	·20	·19	·19	·07	12
13	Dhárwar...	18	17	1,295	144	22	43	42	46	45	45	45	26	18	5	5	9	177	174	351	66	138	·34	·34	·34	·15	13
14	Bijápur	13	11	1,122	99	4	22	32	38	28	30	26	24	12	4	13	17	125	125	250	48	154	·29	·29	·29	·05	14
15	Kánara	16	12	1,265	61	2	6	13	18	30	38	17	16	33	62	27	22	149	135	284	47	68	·68	·64	·66	·28	15
	Gujarát Registration District.																										
16	Surat	12	8	760	23	5	3	7	2	4	10	1	...	...	...	...	3	19	16	35	6	13	·06	·05	·05	·19	16
17	Broach	9	6	409	27	...	8	17	10	15	4	1	1	...	...	...	...	38	18	56	4	35	·24	·12	·18	·10	17
18	Kaira	15	6	586	12	1	2	5	14	2	...	...	...	...	2	...	...	15	11	26	7	12	·04	·03	·04	·05	18
19	Panch Mahals	7	5	660	18	...	1	3	12	8	1	...	2	...	...	...	1	12	16	28	5	9	·07	·10	·09	·04	19
20	Ahmedabad	13	7	880	20	7	9	22	32	15	3	5	...	...	...	3	...	49	47	96	34	45	·11	·12	·12	·13	20
	Sind Registration District.																										
21	Karáchi	16	6	665	18	7	14	33	34	12	6	3	...	1	1	6	44	91	70	161	11	40	·31	·31	·31	·13	21
22	Hyderabad	11	7	864	7	...	2	1	11	25	21	11	5	6	1	19	77	89	90	179	38	41	·26	·32	·29	·01	22
23	Thar and Párkar ...	13	1	901	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	·01	23
24	Nawábsháh	9	5	721	7	...	12	4	...	1	...	...	...	...	...	...	6	14	9	23	...	4	·06	·04	·05	·02	24
25	Lárkána	15	15	737	61	...	...	12	13	20	19	11	2	14	44	78	137	184	166	350	52	134	·51	·55	·53	...	25
26	Sukkur	12	7	684	12	...	...	2	5	7	11	6	...	19	1	13	30	44	50	94	11	4	·14	·19	·16	·02	26
27	Upper Sind Frontier ...	6	5	422	10	14	8	2	12	21	·3	10	4	...	...	7	3	36	48	84	5	18	·25	·42	·32	·01	27
	Total fo the Presidency.	361	267	26,253	1,496	535	768	1,026	997	836	558	345	195	168	165	223	416	3242	2,990	6,232	1,424	2,811	·32	·32	·32	·20	

ANNUAL FORM No. IX.—DEATHS *registered from* FEVER *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1919.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which fever deaths were reported.	Number in each District.	Number from which fever deaths were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	22	22	1,438	1,328	1,322	919	958	897	1,017	818	1,318	1,717	1,407	1,186	936	1,012	6,843	6,724	13,567	13·12	13·12	13·12	27·14	1
2	West Khándesh ...	10	10	1,096	1,096	1,183	801	786	615	533	417	703	1,081	763	667	620	722	4,414	4,477	8,891	15·04	15·58	15·31	28·92	2
3	Násik	19	19	1,649	1,545	1,786	1,152	1,107	1,196	1,129	1,097	1,422	1,670	1,132	1,172	1,079	1,553	8,097	7,398	15,495	17·79	16·51	17·15	29·06	3
4	Thána	18	18	1,643	1,560	2,671	2,087	2,094	1,776	1,874	1,558	1,899	1,872	1,438	1,602	1,707	1,932	11,548	10,462	22,010	25·37	24·66	24·99	25·66	4
5	Kolába	14	14	1,461	1,379	1,315	1,066	1,040	930	892	722	850	1,164	945	787	1,186	1,618	6,333	6,182	12,515	21·46	20·68	21·07	25·57	5
6	City of Bombay ...	1	1	1	1	445	319	360	786	669	369	395	451	479	500	403	394	3,289	2,281	5,570	5·22	6·84	5·78	2·86	6
	Central Registration District.																								
7	Ahmednagar ...	15	15	1,348	1,178	665	632	763	734	874	879	1,056	1,112	1,026	980	772	973	5,630	4,836	10,466	11·85	9·89	11·09	24·17	7
8	Poona	18	18	1,201	1,080	1,239	1,539	2,070	1,591	1,463	1,214	1,338	1,222	1,040	1,113	991	1,548	8,764	7,604	16,368	16·28	14·44	15·37	23·03	8
9	Sholápur	10	10	718	605	789	709	785	909	947	838	1,065	1,085	752	824	738	950	5,415	4,976	10,391	13·84	13·20	13·53	33·02	9
10	Sátára	19	19	1,346	1,230	1,162	941	1,064	1,061	1,320	1,091	1,231	1,509	1,291	1,278	1,217	1,355	7,692	6,828	14,520	14·27	12·49	13·43	27·02	10
11	Ratnágiri	15	15	1,311	1,265	1,852	1,583	1,193	1,254	1,470	982	1,208	1,473	1,369	1,349	1,196	1,623	7,947	8,610	16,557	14·36	13·24	13·76	16·89	11
	Southern Registration District.																								
12	Belgaum	15	15	1,070	902	492	349	490	431	437	425	422	396	315	355	415	558	2,674	2,411	5,085	5·59	5·20	5·40	15·91	12
13	Dhárwár	18	18	1,295	1,104	1,041	701	817	754	763	670	680	694	682	769	888	1,300	4,855	4,894	9,749	9·34	9·69	9·51	17·21	13
14	Bijápur	13	13	1,122	1,038	843	608	764	795	776	782	864	839	841	835	791	994	4,983	4,749	9,732	11·49	11·07	11·28	26·79	14
15	Kánara	16	16	1,265	930	632	350	335	255	290	301	356	434	364	369	385	499	2,272	2,298	4,570	10·32	10·92	10·62	16·89	15
	Gujarát Registration District.																								
16	Surat	12	12	760	698	917	759	809	611	707	726	722	637	467	444	476	572	4,004	3,843	7,847	12·25	11·75	12·00	18·70	16
17	Broach	9	9	409	388	503	480	575	691	612	390	367	375	313	403	464	397	2,728	2,828	5,556	17·31	19·05	18·15	25·10	17
18	Kaira	15	15	586	545	566	485	656	724	652	408	404	651	578	643	612	509	3,591	3,357	6,948	9·70	10·44	10·04	17·59	18
19	Panch Mahális ...	7	7	660	546	407	350	334	334	337	297	389	596	505	430	355	310	2,302	2,392	4,694	13·88	15·26	14·55	21·13	19
20	Ahmedabad ...	13	13	880	852	827	817	1,139	976	884	606	675	1,140	1,284	1,564	1,540	1,330	6,639	6,143	12,782	15·36	15·54	15·45	24·85	20
	Sind Registration District.																								
21	Karáchi	16	16	665	665	2,348	464	487	260	324	191	182	157	270	331	523	1,412	3,863	3,091	6,954	13·30	13·68	13·46	19·86	21
22	Hyderabad ...	11	11	864	864	3,812	1,347	827	694	518	436	378	396	645	805	973	1,022	6,537	5,317	11,854	19·22	19·44	19·39	26·42	22
23	Thar and Párkar...	13	13	901	901	2,618	1,185	609	674	575	384	344	314	347	514	512	556	5,030	3,593	8,632	20·92	17·74	19·92	33·48	23
24	Nawabshah ...	9	9	721	721	3,571	1,153	640	334	265	252	232	212	279	398	567	599	4,620	3,887	8,507	18·65	19·33	18·96	34·97	24
25	Lárkána	15	15	737	737	2,868	1,197	881	653	516	431	562	497	662	869	1,050	1,051	6,041	5,246	11,287	16·81	17·39	17·08	31·56	25
26	Sukkur	12	12	684	684	1,546	958	674	598	567	578	519	539	547	822	1,068	1,127	5,122	4,421	9,543	16·28	16·95	16·64	34·58	26
27	Upper Sind Frontier	6	6	422	422	1,270	714	335	257	269	246	265	192	197	336	300	278	2,631	2,028	4,659	18·08	17·27	17·71	32·65	27
	Total for the Presidency ...	361	361	26,253	24,264	38,693	23,670	22,592	20,840	20,670	17,158	19,406	22,485	19,938	21,346	21,769	26,192	143,883	130,876	274,759	14·12	13·92	14·03	23·78	

ANNUAL FORM No. X.—DEATHS *registered from* DYSENTERY *and* DIARRHŒA *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1919.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	East Khándesh ...	22	22	1,438	444	131	75	78	80	98	136	283	337	253	114	89	67	921	820	1,741	1·75	1·60	1·68	1·64	1
2	West Khándesh ...	10	10	1,096	209	42	52	26	28	27	29	61	102	51	43	23	16	262	238	500	·89	·83	·86	·64	2
3	Násik	19	19	1,649	542	78	71	82	58	88	195	357	393	239	191	124	116	1,090	902	1 992	2·39	2·01	2·20	1·33	3
4	Thána	18	18	2,643	390	97	84	115	64	107	118	215	261	89	59	32	73	737	577	1,314	1·61	1·36	1·49	·85	4
5	Kolába... ...	14	14	1,461	504	100	107	52	59	83	73	145	264	148	71	43	53	657	541	1,198	2·23	1·81	2·02	1·70	5
6	City of Bombay ...	1	1	1	1	474	363	287	423	465	331	409	514	384	281	195	270	2,476	1,920	4,396	3·93	5·76	4·56	2·64	6
	Central Registration District.																								
7	Ahmednagar	15	15	1,348	825	147	116	133	141	207	274	403	606	509	382	184	152	1,756	1,498	3,254	3·72	3·20	3·45	3·24	7
8	Poona	18	18	1,201	688	200	170	159	177	232	336	613	782	492	365	219	224	2,189	1,770	3,959	4·07	3·36	3·72	2·89	8
9	Sholápur	10	10	718	440	156	78	97	130	170	279	432	432	238	198	130	121	1,333	1,173	2,511	3·42	3·11	3·27	4·21	9
10	Sátára	19	19	1,346	673	153	115	111	133	212	302	347	398	298	284	180	153	1,412	1,274	2,686	2·62	2·35	2·49	3·14	10
11	Ratnágiri	15	15	1,311	518	147	138	81	71	86	91	159	298	205	163	125	127	920	771	1,691	1·66	1·19	1·40	2·15	11
	Southern Registration District.																								
12	Belgaum	15	15	1,070	594	158	134	141	164	234	356	399	411	275	305	225	189	1,484	1,507	2,9[illegible]	3·10	3·25	3·18	3·77	12
13	Dhárwár	18	18	1,295	389	104	104	79	99	119	165	192	136	130	180	150	185	883	760	1,6[illegible]	1·70	1·50	1·60	1·51	13
14	Bijápur	13	13	1,122	594	170	114	116	93	113	191	357	407	369	375	259	232	1,378	1,411	2,78[illegible]	3·18	3·29	3·23	2·76	14
15	Kánara	16	16	1,265	321	101	86	87	48	63	85	150	217	191	114	103	103	709	644	1,353	3·22	3 06	3·14	2·51	15
	Gujarát Registration District.																								
16	Surat	12	12	760	201	29	45	61	39	62	67	143	138	64	34	41	54	429	348	777	1 31	1·07	1·19	·95	16
17	Broach...	9	9	409	127	11	13	34	57	31	18	51	48	28	28	9	8	173	163	336	1·09	1·09	1·10	·93	17
18	Kaira	15	15	586	230	47	45	50	53	59	32	94	208	136	87	62	47	511	409	920	1 38	1·27	1·33	1·38	18
19	Panch Mahális ...	7	7	660	152	2	10	10	15	9	7	33	93	95	52	13	17	159	202	361	·95	1·23	1·12	·37	19
20	Ahmedabad ...	13	13	880	251	54	47	102	53	69	45	137	282	199	126	148	150	760	652	1,412	1·75	1·65	1·71	1·12	20
	Sind Registration District.																								
21	Karáchi	16	12	665	15	13	8	11	21	26	12	8	13	26	17	6	8	100	69	169	·34	·30	·33	·42	21
22	Hyderabad	11	8	864	22	4	8	13	14	10	13	9	8	9	11	8	10	70	47	117	·21	·17	·19	·39	22
23	Thar and Párkar ...	13	9	901	15	2	8	3	1	3	3	1	3	2	...	4	6	26	10	36	·11	·05	·09	·16	23
24	Nawabshah	9	6	721	14	4	3	9	...	5	3	2	4	1	1	2	...	19	15	34	·07	·07	·07	·09	24
25	Lárkána	15	11	737	15	...	1	...	5	...	6	21	...	3	3	5	...	26	18	44	·07	·05	·06	·04	25
26	Sukkur...	12	11	684	23	5	2	13	9	4	5	7	7	4	6	9	7	52	26	78	·17	·10	·14	·19	26
27	Upper Sind Frontier	6	4	422	5	1	...	1	1	1	9	1	...	...	1	...	...	9	6	15	·06	·05	·06	·15	27
	Total for the Presidency ...	361	340	26,253	8,202	2,430	1,997	1,951	2,089	2,578	3,171	5,029	6,417	4,438	3,491	2,388	2,388	20,546	17,771	38,317	2·89	1·89	1·96	1·81	

ANNUAL FORM No. XI.—DEATHS *registered from* RESPIRATORY DISEASES *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1919.*

1	2	3		4		5												6			7			8	9
No.	Districts.	Circles of Registration.		Villages.														Total.			Ratio of Deaths per 1,000 of Population.				No.
		Number in each District.	Number from which deaths Respiratory Diseases were reported.	Number in each District.	Number from which deaths Respiratory Diseases were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	
	Western Registration District.																								
1	East Khándesh ...	22	22	1,438	905	496	372	431	297	257	199	350	458	382	405	353	416	2,394	2,022	4,416	4·59	3·94	4·26	4·67	1
2	West Khándesh...	10	10	1,096	542	238	200	184	139	124	108	160	232	171	181	164	186	1,126	961	2,087	3·84	3·34	3·60	3·29	2
3	Násik ...	19	19	1,649	999	374	340	384	308	307	335	507	574	483	499	347	394	2,511	2,321	4,832	5·52	5·19	5·35	4·65	3
4	Thána ...	18	18	1,643	435	148	129	143	143	160	139	137	169	133	125	126	152	1,005	699	1,704	2·29	1·65	1·93	1·22	4
5	Kolába ...	14	14	1,461	499	135	129	124	114	119	89	128	140	121	119	140	164	855	667	1,522	2·89	2·23	2·56	1·84	5
6	City of Bombay...	1	1	1	1	2,570	2,115	2,178	2,574	2,887	1,975	2,009	1,990	1,811	1,972	1,645	1,693	14,622	10,797	25,419	23·21	32·37	26·39	13·47	6
	Central Registration District.																								
7	Ahmednagar ...	15	15	1,348	966	412	333	358	308	334	352	424	449	449	442	299	461	2,347	2,274	4,621	4·94	4·85	4·89	5·47	7
8	Poona ...	18	18	1,201	762	605	550	626	651	628	573	623	654	589	602	478	708	3,822	3,465	7,287	7·10	6·58	6·84	5·47	8
9	Sholápur ...	10	10	718	378	173	122	152	141	135	127	174	163	147	160	146	231	958	913	1,871	2·45	2·42	2·44	2·69	9
10	Sátára ...	19	19	1,346	493	164	148	151	115	160	145	148	165	146	169	142	192	934	911	1,845	1·73	1·68	1·71	2·09	10
11	Ratnágiri ...	15	15	1,311	980	572	486	424	447	456	372	469	462	431	447	403	496	3,034	2,431	5,465	5·48	3·74	4·54	3·84	11
	Southern Registration District.																								
12	Belgaum ...	15	15	1,070	614	249	214	239	193	223	213	215	216	234	215	226	258	1,449	1,246	2,695	3·03	2·69	2·86	3·70	12
13	Dhárwár ...	18	18	1,295	687	413	311	327	262	264	212	236	242	267	329	335	425	1,827	1,796	3,623	3·51	3·56	3·53	4·54	13
14	Bijápur ...	13	13	1,122	680	309	201	257	215	224	203	205	211	216	284	226	300	1,568	1,283	2,851	3·61	2·99	3·30	3·33	14
15	Kánara ...	16	16	1,265	281	67	70	42	42	59	35	55	56	63	63	60	61	365	308	673	1·66	1·46	1·56	1·35	15
	Gujarát Registration District.																								
16	Surat ...	12	12	760	635	650	539	628	630	523	492	583	600	375	422	528	794	3,656	3,108	6,764	11·17	9·50	10·34	9·76	16
17	Broach ...	9	9	409	312	354	293	269	314	170	129	220	221	182	207	149	186	1,450	1,244	2,694	9·16	8·38	8·78	8·64	17
18	Kaira ...	15	15	586	531	509	393	429	384	371	301	436	644	528	582	547	625	3,138	2,566	5,749	8·59	7·98	8·31	9·33	18
19	Panch Maháls ...	7	7	660	313	49	73	93	49	30	34	57	88	82	107	77	78	471	346	817	2·83	2·20	2·53	1·64	19
20	Ahmedabad ...	13	12	880	577	560	576	628	555	517	395	453	594	607	549	887	1,062	4,142	3,241	7,383	9·58	8·20	8·92	8·27	20
	Sind Registration District.																								
21	Karáchi ...	16	15	665	24	161	165	135	141	142	95	78	117	100	95	129	132	899	591	1,490	3·10	2·62	2·89	2·38	21
22	Hyderabad ...	11	11	864	69	211	217	184	73	65	37	38	46	38	40	67	152	614	534	1,148	1·82	1·92	1·88	1·53	22
23	Thar and Párkar.	13	13	901	61	247	87	79	28	26	12	7	1	1	2	15	39	330	214	544	1·37	1·11	1·25	·93	23
24	Nawábshah ...	9	9	721	52	94	178	40	12	7	11	7	4	6	5	7	30	247	154	401	1·00	·78	·90	·23	24
25	Lárkána ...	15	15	737	35	206	73	49	11	10	4	7	1	7	5	11	13	232	165	397	·66	·55	·61	·07	25
26	Sukkur ...	12	12	684	33	44	46	60	10	13	5	10	6	2	7	27	57	176	111	287	·57	·43	·51	·33	26
27	Upper Sind Frontier ...	6	5	422	7	25	4	4	3	2	...	...	1	...	...	3	6	31	17	48	·21	·15	·18	·21	27
	Total for the Presidency ...	361	358	26,253	11,866	10,035	8,364	8,598	8,159	8,213	6,592	7,736	8,504	7,571	8,033	7,537	9,291	54,248	44,385	98,633	5·32	4·72	5·04	4·28	

ANNUAL FORM No. XII.—DEATHS *registered from* PLAGUE *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1919.*

1	2	3		4		5												6			7			8	9
No.	Districts.	Circles of Registration.		Villages.														Total.			Ratio of Deaths per 1,000 of Population.				No.
		Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	
	Western Registration District.																								
1	East Khándesh...	22	9	1,438	20	...	...	...	...	...	...	...	...	5	30	188	207	214	216	430	·41	·42	·42	4·35	
2	West Khándesh...	10	6	1,096	42	3	1	8	2	...	...	3	27	589	724	447	390	1,092	1,102	2,194	3·72	3·86	3·78	6·39	3
3	Násik ...	19	5	1,649	4	1	9	2	...	1	...	...	...	2	...	1	1	9	8	17	·02	·02	·02	6·07	3
4	Thána ...	18	10	1,643	16	5	9	29	15	9	28	26	20	7	6	3	25	104	78	182	·23	·18	·21	·77	4
5	Kolába ...	14	6	1,461	13	...	3	38	28	5	...	...	2	10	10	16	16	63	65	128	·21	·22	·22	·61	5
6	City of Bombay...	1	1	1	1	4	11	112	255	216	41	19	19	9	6	3	2	510	187	697	·81	·56	·72	1·73	6
	Central Registration District.																								
7	Ahmednagar ...	15	2	1,348	4	4	9	31	5	...	...	...	...	...	...	...	2	25	26	51	·05	·06	·05	3·91	7
8	Poona ...	18	10	1,201	13	14	14	9	6	...	...	...	...	6	18	7	...	29	45	74	·06	·09	·07	5·43	8
9	Sholápur ...	10	4	718	4	16	51	17	1	3	...	...	...	...	...	...	...	54	34	88	·14	·09	·11	9·95	9
10	Sátára ...	19	9	1,346	44	286	127	143	59	32	42	107	243	111	51	80	172	673	735	1,408	1·25	1·36	1·30	10·39	10
11	Ratnágiri ...	15	3	1,311	14	4	50	125	125	39	3	39	37	7	...	...	...	197	232	429	·36	·36	·36	·20	11
	Southern Registration District.																								
12	Belgaum ...	15	12	1,070	31	98	98	50	20	3	...	11	111	90	35	21	41	271	307	578	·57	·66	·61	7·48	12
13	Dhárwár ...	18	15	1,295	94	306	142	56	16	4	11	66	224	322	434	422	435	1,172	1,266	2,438	2·25	2·50	2·38	6·15	13
14	Bijápur ...	13	7	1,122	22	77	32	15	...	...	...	...	9	20	26	47	28	117	137	254	·27	·32	·29	4·95	14
15	Kánara ...	16	2	1,265	6	8	2	15	15	1	...	...	...	...	1	13	8	37	26	63	·17	·12	·15	·26	15
	Gujarát Registration District.																								
16	Surat ...	12	5	760	9	2	5	8	14	6	1	...	...	1	1	2	...	23	17	40	·07	·05	·06	1·26	16
17	Broach ...	9	2	409	4	11	15	19	1	...	...	...	...	...	...	...	...	22	24	46	·14	·16	·15	1·13	17
18	Kaira ...	15	2	586	4	3	6	9	1	...	...	...	...	...	...	...	...	10	9	19	·03	·03	·03	2·65	18
19	Panch Maháls ...	7	...	660	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·80	19
20	Ahmedabad ...	13	2	880	2	...	...	1	1	...	...	1	...	1	1	...	...	5	...	5	·01	...	·01	2·87	20
	Sind Registration District.																								
21	Karáchi ...	16	6	665	7	9	9	53	68	159	67	35	16	8	12	15	7	281	177	458	·97	·78	·87	2·11	21
22	Hyderabad ...	11	2	864	2	...	...	...	6	9	1	...	...	...	1	...	...	7	10	17	·02	·04	·03	1·61	22
23	Thar and Párkar.	13	...	901	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·07	23
24	Nawábshah ...	9	3	721	3	...	...	...	4	...	...	...	1	...	1	...	...	6	...	6	·02	...	·02	·11	24
25	Lárkána ...	15	1	737	1	...	...	...	...	2	...	...	...	...	...	...	...	1	1	2	·00	·00	·00	·07	25
26	Sukkur ...	12	1	684	1	...	...	...	...	2	...	...	...	...	...	...	...	2	...	2	·00	...	·00	·77	26
27	Upper Sind Frontier ...	6	...	422	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·13	27
	Total for the Presidency ...	361	124	26,253	361	801	593	745	642	491	194	307	709	1,188	1,357	1,265	1,334	4,924	4,702	9,626	·48	·50	·49	3·94	

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SECTIONS I TO IV—No remarks.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

In accordance with Government of India's letter, Department of Education (Sanitary), No. 13-C., dated 6th December 1918, printed in the preamble to Government Order, General Department, No. 9101, dated 30th October 1919, certain changes have been made in Appendix IV—Annual Sanitary Forms of this report, *i.e.*, Form No. V—Deaths registered according to classes, by *sex*.

2. The birth and death ratios are calculated on the Census population of 1911.

3. *Europeans.*—During the year among 30,192 Europeans, 333 births and 382 deaths were recorded against 291 and 329 in 1919. The calculated birth-rate was 11·03 per mille against 9·64 in 1919 and the death-rate 12·65 against 10·90. Of the 333 births, 174 were males and 159 females against 152 and 139 in 1919, while 237 male and 145 female deaths were recorded against 205 and 124 in 1919.

Of the 382 deaths, 3, 79, 47 and 67 were due to small-pox, fever, dysentery and diarrhœa and respiratory diseases, respectively against 7, 34, 21 and 55 in 1919.

4. *Anglo-Indians.*—In a population of 8,902, 166 births and 210 deaths were registered against 165 and 215 in 1919. The birth and death ratio per mille were 18·65 and 23·59, respectively, compared with 18·20 and 24·50 in 1919. Of the births 86 were males and 80 females against 87 and 75 in 1919 and of the deaths 124 were among males and 86 among females against 112 and 103 in 1919.

Of the 210 deaths, 4, 1, 30, 26 and 71 were due to small-pox, plague, fever, dysentery and diarrhœa and respiratory diseases against 5, 1, 16, 24 and 55, respectively in 1919.

5. *Indian Population.*—The population including Sind was in 1911, 19,587,383. During the year no change was made in the number of registration units.

6. *Births.*—The year 1914 shewed the highest birth-rate for the last 23 years. Since that year there has been a slight but steady decline to a low figure in the Influenza years 1918-19. The figure for the year under report shews a decided recovery which is shared by all districts, Sind included. 5,93,175 births were registered—an increase of 46,715 over the figure for 1919, but 86,277 less than the decennial mean. The number of births recorded annually since 1910 is as follows:—

1910	689,701	1916	704,672
1911	705,090	1917	699,823
1912	684,890	1918	619,224
1913	684,803	1919	546,460
1914	733,076	1920	593,175
1915	726,780		

7. The birth-rate for the year for the Presidency and Sind combined was 30·28. For the Presidency and Sind separately the figures are 33·60 and 18·75. The rates recorded in other parts of India are given below:—

Bengal	30·00	Bihar and Orissa ..	32·28
Madras	28·42	United Provinces ..	35·55
Assam	31·53	Punjab	42·91
Burma	33·78	Central Provinces ..	39·17

In the Presidency proper excluding Bombay City and Sind the birth-rate for rural areas was 34·05 against 29·31 for urban areas.

8. Over rural areas the birth-rate varied from 47·16 for Jambusar Taluka in Broach District to as low a figure as 18·13 in Mundgod Petha in Kanara District and 17·60 in Mokhada Petha in Thana District. Of the 188 talukas, pethas and mahals, eighty-one or 43 per cent. returned birth-rates above 35. Besides Jambusar this group includes Bhadgaon (46·30) in East Khandesh District, Hansot (46·29) in Broach, Belgaum (45·63) and Barsi Taluka (41·46), in Sholapur District. Fifty-four returned rates between 35 and 30 and the remaining 53 or 28 per cent. returned rates below 30 per mille of population. Of the latter the following shew rates of 25 and under, *viz.*, 1 (Peint) in Nasik District, 7 (Bassein, Bandra, Salsette, Shahapur, Murbad, Kalyan and Mokhada) in Thana; 1 (Mamlcolmpeth) in Satara; 3 (Chiplun, Guhagar and Khed) in Ratnagiri; and 2 (Yellapur and Mundgod) in Kanara District.

The rural circles in Ratnagiri, Kanara, and Thana Districts consistently return low birth-rates year after year. This is due in part to the difficulty of registration

in such scattered populations and is in part attributable to the debilitating effect of climate.

9. Out of 84 towns, 12 returned birth-rates of over 40, *viz.*, Sholapur (53·68), Dohad (51·70), Gokak (50·50), Ranebennur (48·94), Borsad (47·98), Jambusar (47·16), Gadag-Bettigeri (44·33), Umreth (43·29), Gokarn (42·23), Kapadvanj (41·98), Ahmedabad (41·41), Nasirabad (40·98).

Eight towns recorded birth-rates of between 35 and 40, 52 towns or 62 per cent. recorded birth-rates between 35 and 20 per 1,000. In 11 towns the recorded birth-rates were under 20, *viz.*, Bhiwandi (19·56), Satara (19·50), Godhra (19·41), Panwel (19·11), Mahad (18·70), Nagar (17·54), Kurla (16·84), Karwar (15·79), Lonavla (15·53), Manmad (14·97) and Karad (11·49).

The municipalities are responsible amongst other matters of public health, for the collection of the data and it is to be borne in mind in the case of most of the last named towns that the low figures so much at variance with the general birth-rate must be attributed mainly to default in registration during the year. The extent to which natural causes are in operation to produce a low birth-rate is thereby occluded. In Poona City a birth-rate of 20·18 per mille was recorded. Previous figures were 6·94 in 1916 and 11·46, 13·92 and 20·94 successively in the three years ending 1919. This shews steady improvement in the Registration of births which if maintained will permit of reliable deductions from future birth figure.

10. Nineteen thousand four hundred and fifty-one births were recorded in Bombay City against 20,475 in 1919; the birth-rate being 20·19 against 21·25 in the preceding year.

11. In Sind, 65,741 births were recorded, an increase of 6,577 over the figure for 1919. The birth-rate for the year was 18·75 against 16·87 in 1919.

In the Presidency proper the rural exceeds the urban birth-rate. In Sind the reverse is the case as in previous years, the urban rate being 35·63 and the rural 16·44 per 1,000 of population. Karachi City returned a birth-rate of 51·12 and of the remaining 18 urban circles in Sind three returned birth-rates of over 35, *viz.*, Nawabshah (39·77), Hyderabad (35·19) and Rato Dero (35·11). Four towns, *viz.*, Sukkur (33·57), Garhi-Yasin (33·44), Rohri (31·56), and Larkana (30·97) shew rates between 30 and 35. For the rest the lowest figures were recorded in Hala (16·91), Kotri (15·84), and Mirpur Khas (7·42)—figures showing default ranging between probably 50 and 80 per cent. in registration. Hyderabad City has shewn a steady improvement in registration since the duty was entrusted to a special Registrar.

12. For Cantonments the highest birth-rate (34·46) was recorded in Ahmednagar. In the remainder it was less than 20, the lowest 2·79 being recorded in Belgaum Cantonment.

13. Out of 593,175 births, 309,463 were males and 283,712 females, a percentage of male to female births of 109·08, the previous year's figure being 109·06. The proportion of male to female births registered varied from 102·39 in Belgaum District to 136·20 in Nawabshah District.

14. *Still-Births.*—Nine thousand three hundred and sixty-eight still-births or 1·58 per 100 live births were registered. The corresponding figures for 1919 were 9,159 and 1·68. The percentage of still to live births varied from ·07 for Ahmednagar District to 9·59 for the City of Bombay. In Kanara (5·66), Dharwar (3·53), Kolaba (2·71), Bijapur (2·34), Poona (2·28), and Karachi (2·21), the percentages of still to live-births were the highest.

15. *Deaths.*—Five hundred and sixty-one thousand two hundred and ninety-six deaths were registered against 637,170 in 1919, 722,202 the decennial mean and 612,329 the mean for the 5 pre-Influenza years. Deaths among males numbered 295,038 and among females 266,258 against 335,548 and 301,622, respectively in 1919.

The following table shows the total deaths recorded annually since 1910 :—

1910	.. ..	560,003	1916	.. ..	652,585
1911	.. ..	555,312	1917	.. ..	768,406
1912	.. ..	683,210	1918	.. ..	1,724,674
1913	.. ..	521,539	1919	.. ..	637,170
1914	.. ..	577,504	1920	.. ..	561,296
1915	.. ..	511,613			

16. The recorded death-rate for the whole Presidency works out to 28·65, the lowest since 1915. The death-rate in 1919 was 32·53; 36·87 was the decennial mean figure and 31·26 the mean for the 5 pre-Influenza years.

For other parts of India the death-rates recorded are as follows :—

Madras	21·87	Bihar and Orissa ..	30·94
Bengal	32·7	Punjab	28·55
Assam	28·98	United Provinces ..	37·23
Burma	26·44	Central Provinces ..	40·11

Excluding Bombay City and Sind the death-rate for the Presidency was 30·34 against 32·66 in 1919. The death-rates for rural and urban areas were 29·69 and 35·20, respectively, against 31·99 and 37·71 in 1919.

By districts the highest death-rate (37·61) was recorded in Kaira and the lowest (23·13) in Ahmednagar.

17. Of the 188 talukas, pethas and mahals, 19 show death-rates above 40, *viz.*, Mulshi (50·07), Peint (49·02), Mokhada (47·68), Igatpuri (47·46), Shirala (47·16), Bhiwandi (46·60), Mawal (45·46), Bardoli (45·16), Sirsi (44·53), Wada (43·58), Kalghatgi (43·03), Shahapur (42·92), Bankapur (42·54), Hubli (42·54), Roha (42·01), Khalapur (41·56), Valod (40·96), Mehmedabad (40·82), and Nasik (40·24).

18. For urban areas death-rates varied between 58·99 for Sholapur and 9·64 for Karwar. Out of 84 urban registration areas, 14 returned death-rates over 40, *viz.*, Nadiad (52·90), Gokarn (50·90), Ahmedabad (50·11), Nasik (49·66), Poona (47·73), Borsad (47·55), Dakore (45·98), Alibag (45·86), Pandharpur (45·67), Thana (45·09), Viramgam (43·67), Gokak (42·18), Umreth (41·32) and Gadag-Bettigeri (40·25).

19. The following table gives death-rates corrected in accordance with age and sex distribution for the seven towns for which such correction is possible :—

	Standard death-rate.	Factor for correction.	Recorded death-rate.	Corrected death-rate.
Presidency	37·7	1	28·65	28·65
Sholapur	36·3	1·03	58·99	60·75
Poona	36·5	1·03	47·73	49·16
Karachi	35·6	1·06	40·70	43·14
Ahmedabad	36·3	1·03	50·11	51·61
Bombay City	31·2	1·21	47·10	56·99
Surat	36·6	1·03	33·79	34·80

20. *Bombay City.*—The death-rate for Bombay City was 47·10 against 70·52 in 1919 and a quinquennial mean of 43·75. The increase over the mean is chiefly under the heading respiratory diseases. The registered number of deaths was 45,376 against 67,936 in 1919. The number of infantile deaths was 10,807 equal to a ratio of 555·60 per 1,000 births.

21. *Ahmedabad City.*—The death-rate recorded was 50·11 against 49·03 in 1919 and a quinquennial mean of 58·49. The chief causes of deaths shewn in the returns were fever and respiratory diseases. The birth-rate per 1,000 was 41·41 against 39·71 in 1919. The infantile deaths numbered 3,191, corresponding to a ratio of 360·08 per 1,000 births.

22. *Poona City.*—The death-rate was 47·73 against 59·29 in 1919. The chief causes of deaths shown in the returns were fever and respiratory diseases. The birth-rate was 20·18 against 20·94 in 1919. During the year 1,462 infants under 1 year died against 1,611 in 1919. The infantile death-rate per 1,000 of births amounted to 574·01.

23. *Karachi City.*—The death-rate was 40·70 against 51·47 in 1919 and the birth-rate 51·12 against 52·65 in 1919. The infantile deaths numbered 1,805 equal to a ratio of 251·29 per 1,000 births.

24. *Surat City.*—The death-rate was 33·79 against 31·95 in 1919. The birth-rate was 27·54 against 24·61 in 1919, 961 infants under 1 year died, corresponding to a ratio of 304·11 per 1,000 registered births.

25. *Sholapur City.*—The death-rate was 58·99 against 71·00 in 1919. The chief cause of death shewn in the returns was fever. The birth-rate was 53·68 against 47·61 in the previous year. The infantile deaths numbered 922 equal to a ratio of 281·44 per 1,000 births.

The continued high death-rate under fever in Sholapur and from respiratory diseases in the other cities side by side with the fall in their total death-rate indicates that Influenza still prevailed.

26. *Death-rate in Sind.*—The death-rate for Sind was 16·31 against 21·50 in 1919. The variation between the rate for urban areas (30·65) and that for rural areas (14·35) is very marked. This must be mainly attributed to faulty registration in the latter. Registration in many of the smaller towns also appears to be defective; compare the death-rate figure 11·80 for Hala with that for Karachi City, 40·70.

27. *Death-rate in Cantonments.*—The lowest death-rate (9·99) was recorded in Karachi Cantonment and the highest (56·63) in Deolali Cantonment.

28. Over the Presidency as a whole the births exceeded the deaths by 31,879. Figures for districts are given in columns 6 and 9 of Annual Form II and the following table gives the natural increase or decrease in population for the principal registration areas :—

	Excess of births over deaths.	Percentage increase on population.	Excess of deaths over births.	Percentage decrease on population.
Presidency (excluding Sind and Bombay City).	49,269	·32	....	....
Sind	8,535	·24	....	....
Bombay	....	....	25,925	2·69

29. *Mortality according to sex.*—2,95,038 male and 2,66,258 female deaths were recorded giving death-rates of 28·96 and 28·33, respectively, against 32·93 and 32·09 for 1919. For every 100 females 110·81 males died compared with 111·25 in 1919. In Sind the ratio of male to female deaths was as 128·89 to 100.

30. *Infant Mortality.*—There were 1,08,676 deaths among infants corresponding to a ratio of 183·21 per 1,000 registered births, against 201·93 in 1919 ; the male and female rates were 191·42 and 174·26, respectively, as compared with 206·70 and 196·73 in the previous year. Of the 1,08,676 deaths among infants, 42,521 were among infants under 1 month (24,757 under, and 17,764 over, one week) ; 37,152 between one to six months and 29,003 between six and twelve months. The percentage of the total infant mortality under these three sub-groups works out to 39·01, 34·2 and 26·7, respectively.

Infantile deaths formed 19·36 per cent. of the total deaths against 17·32 in 1919.

The following is a short extract from the report on infant mortality by the Executive Health Officer, Bombay Municipality :—

INFANT MORTALITY.

"The number of deaths among infants under one year of age was 10,896 being 2,638 less than in 1919, but 886 more than the quinquennial average. The percentage of infant mortality to total mortality at all ages was 23·77 against 19·72 in 1919 and 21·97 in 1918. The ratio per 1,000 of live births registered was 552·22 against 652·8 in 1919 and 439·18 the decennial average. Calculated on the estimated number of births (26,969) instead of on the number of births actually registered, the infantile death-rate would be 404.

Causes of Death.—Seven thousand four hundred and twenty-two deaths or more than 68 per cent. of the total deaths in infants were due to diseases of the respiratory system, congenital debility and premature birth against 60 per cent. (8,348 deaths) in 1919. Diarrhœa and enterities caused 683 deaths, malaria, ague and remittent fever, 306. The deaths from small-pox and measles numbered 48 and 42, respectively.

Generally speaking, these are a group of causes which reflect the social environment and economic condition of the parents.

Compared with the averages of the preceding five years, small-pox and measles show decreases of 111 and 93, respectively, all the other causes show increases, the largest (590) being under congenital debility and malformation including premature birth.

Age at Death.—Of the total deaths among infants, 2,084 or 19·12 per cent. took place in the first week of life and 1,484 or 13·61 per cent. in the age period 1 to 4 weeks. The mortality among infants who had not completed the first month of life was thus 3,568 or 32·74 per cent. of the total infant deaths. The number of deaths in the age-groups—1 to 6 months and 6 to 12 months was 3,226 and 4,102, being respectively 29·60 and 37·64 per cent. of the total infant mortality.

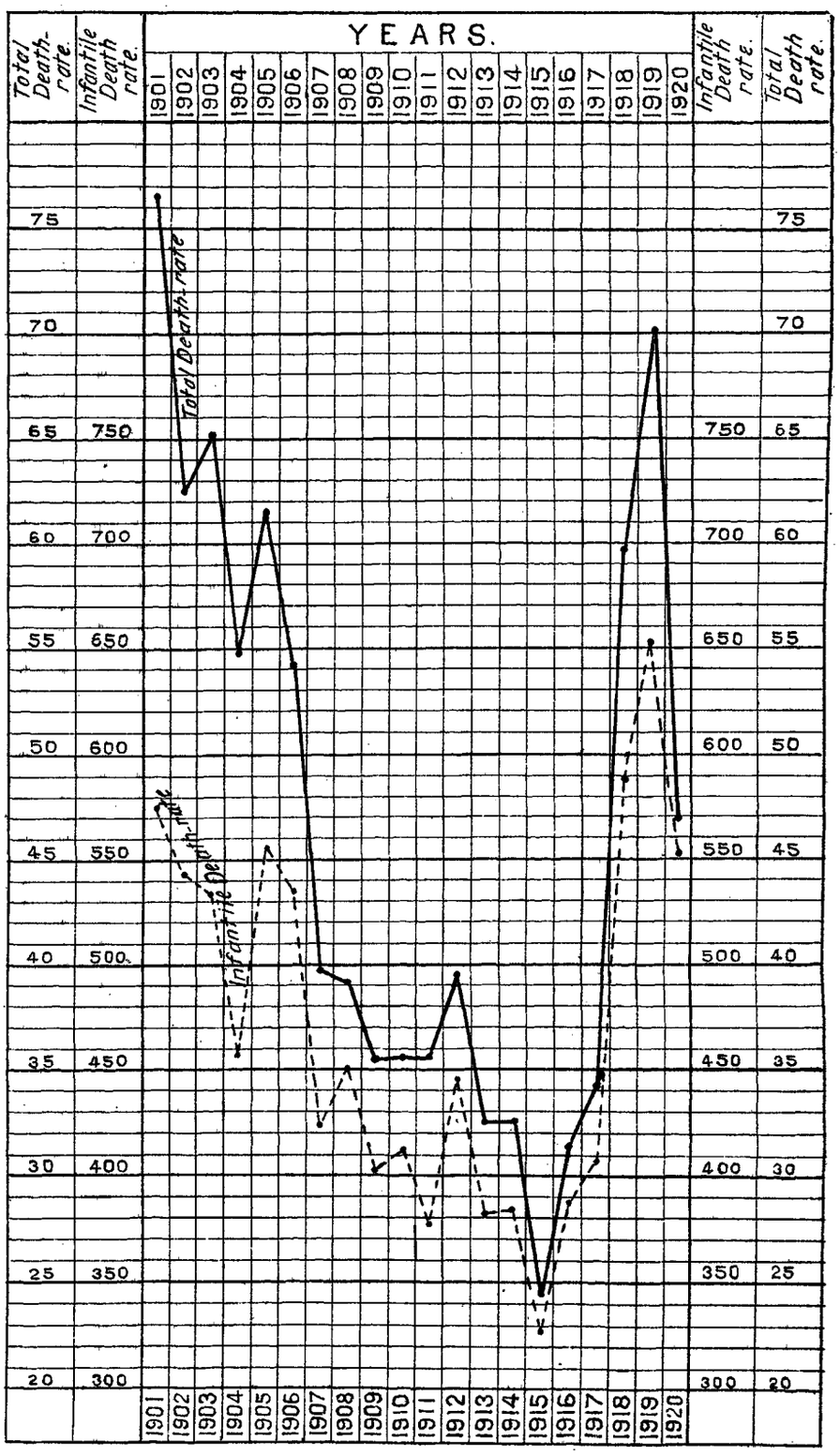
Salient features (in the year's statistics) are the magnitude of the rate played by congenital debility in the causation of death in the first four weeks of life and the large proportion of deaths from respiratory diseases during the remaining 11 months of infancy due to the prevalence of Influenza.

The annexed chart shows the relationship between the total deaths at all ages and the deaths in infants under 1 year in the 20 years 1901-1920.

DIAGRAM

Comparison of Infantile Death-rate with Total Death-rate in Bombay City.

1901 to 1920.



The comparison is of interest in that it shows that the epidemic outbreaks which have raised the general mortality have in practically every instance been accompanied by a closely parallel rise in the death-rate among infants.

This parallelism is clearly shown in the Influenza epidemic of 1918, the Cholera epidemic of 1919, the Small-pox epidemic of 1912 and the years of Plague from 1901 to 1906.

The inference to be drawn is that infants suffer in the same degree as adults from these diseases and that this fact only fails to appear in the list of causes of death among infants, because death at this age is taken as a matter of course and attributed to debility, fever, convulsions or to similar indefinite ailments; without any attempt on the part of the parents to seek advice or ascertain the true cause of the fatal illness.

It should accordingly be borne in mind that whilst some 50 per cent. of the deaths are due to "avoidable" causes such as ignorance and neglect on the part of the mother and insanitary homes, the remainder are due to the epidemics of infectious disease which are not affected by the special measures usually adopted for the reduction of the infantile death-rate.

Some of the figures are grotesque, as, for example, those which show that for every 1,000 Jain children born, 3,000 die. This anomaly is explained by the fact that large numbers of the Jain infants who die in the City are either not born there or if born within the Municipality are not registered.

Unfortunately those figures which are reliable tend to show that the actual, as well as the apparent infantile death-rate in Bombay must be one of the highest in the world."

For Hindus "low caste" the Health Officer's Report shews total deaths under 1 year 1,982 equal to a death-rate of 622·09 per 1,000 births. Amongst other rates are :—Hindus other castes 527·87, Musalmans (including Africans) 539·74, Indian Christians 590·16, Anglo-Indians 330·35 and Europeans 311·37.

"The proportion of poor persons among the Parsees is comparatively small and the standard of education among them being high, it may be assumed that the bulk of Parsi infants are registered at birth and yet their infantile mortality amounted to 199 deaths per 1,000 births.

Since this rate prevails among the better classes in Bombay the fact has got to be faced that for the City as a whole including as it does an unduly large proportion of the very poorest class, the infantile mortality cannot, after every allowance has been made for various sources of fallacy, be fairly estimated at less than 500, which means that of every two infants born, one has to die before reaching the age of 12 months.

The highest infantile death-rate 995·6 was registered in Market section and the lowest 250·0 in Fort South. The sections which showed a higher mortality than the mean for the City were Market (995·6), Mandvi (900·5), Byculla (725·7), Chukla (677·3), Sewri (665·9), Kamathipura (649·5), Bhuleshwar (642·8), and Second Nagpada (623·8).

Infant mortality by the number of rooms occupied in 1920 :—

	Births.		Infant mortality.		Infant mortality per 1,000 births registered.	
	Number.	Percentage.	Number.	Percentage.	1920.	1919.
1 Room and under ..	14,956	75·79	9,440	86·63	63·11	83·13
2 Rooms	2,049	10·38	623	5·70	30·40	56·49
3 Rooms	410	2·07	121	1·11	29·51	35·82
4 Or more rooms ..	297	1·50	86	·77	28·95	18·93
Roadside	25	·12	10	·09	40·00	54·34
Hospitals	1,994	10·10	616	5·65	30·89	11·17
Total ..	19,731	100·00	10,896	100·00	55·22	65·28

Prevention of Infantile Mortality.—The work which is being done in Bombay for the reduction of infant mortality may be grouped under the following heads :—

(*i*) House-visiting for finding out prospective mothers, cases of sickness especially among women and children and unvaccinated children; for enquiry into the condition of new born infants; and for giving instructions as to the care and rearing of children by homely talks;

(*ii*) Attendance on confinements;

(*iii*) Provision of necessaries and comforts during the lying-in period;

(*iv*) Maternity Homes ;

(*v*) Infant Milk Depôts ;

(*vi*) Infant Welfare Centres.

Summary of Work.—During the year the Municipal Nurses and midwives paid 23,365 visits to houses, chawls and huts (against 17,448 in 1919), inquired into 2,247 cases of ordinary sickness, reported 309 cases of infectious diseases and 869 deaths in the female population of the City. They also attended on 1,252 confinements (against 1,028 in the preceding year) and verified the reports of the Birth Karkuns on 9,662 births.

Of the total number of 21,609 births (including 1,878 still-births) registered in the City during the year, 12,903 or 59·7 per cent. were verified by the Municipal nurses and midwives against 49·8 per cent. in 1919 and 55·6 per cent. in 1918.

The proportion of births wholly unattended declined to 3·7 while that of confinements attended by unskilled women rose to 61·0

The percentage of confinements attended by qualified midwives (including Municipal) was 14·2 against 13·8 in 1919 and that of confinements attended by Municipal midwives was 9·7 against 9·0 in the preceding year ; the percentage of children born in hospitals (22·1) showed a very slight decrease of 0·2.

The total number of women admitted in all the three Municipal Maternity Homes during the year was 1,531 against 1,207 in 1919. The number of cases confined in the three Homes was 1,334.

Infant Milk Depôts.—Two Infant Milk Depôts have been established, one at the Bellasis Road and the other at the Parel Road Maternity Home for distributing daily pure milk, free or at a very nominal price, for the benefit of children born in the Homes or under the supervision of the Municipal nurses.

Voluntary Welfare Centres.—During the year 1920, there were two such centres working in the City, namely, one at Sleater Road (Grant Road) in the premises of Dr. Mrs. J. R. Dadabhoy's Lying-in-Hospital and the other at Imamwada Mahomed Haji Sabu Sidik Maternity Home. Each centre is in charge of a supervisor who is a trained Nurse and a Midwife. She supervises the milk distribution and assists the Lady Doctor in charge in attending on babies and advising mothers on infant management. There is also a Health Visitor, who is a trained Nurse and Midwife, attached to each centre. She visits the babies in the district and persuades their mothers to take advantage of the Infant Welfare Scheme.

Dr. Mrs. J. R. Dadabhoy, M.D. (Lond.), the Honorary Physician in charge of both these "centres", attends each centre twice a week.

The monthly attendance on an average during 1920 was :—

At Sleater Road	1,000
At Imamwada	2,000

At Sleater Road 500 seers and at Imamwada 1,000 seers of milk were distributed free of charge every month.

The Sleater Road Centre contains a creche located on the ground floor of a cool and airy house facing Grant Road Railway Station with accommodation for a number of babies, besides a consulting room and a dispensary."

31. Throughout the Presidency the mortality of infants in the first month of life is very high relatively to that in later months of age as well as absolutely. This will be seen from the following table compiled for all Registration Districts :—

Districts.	Under one month per cent.	Between one and six months per cent.	Between six and twelve months per cent.
Western Registration District	41·7	36·4	21·9
Central ,, ...	40·6	34·9	24·5
Southern ,, ...	43·1	38·4	18·5
Guzerat ,, ...	33·8	35·2	31·0
Sind ,, ...	40·8	24·8	34·4
Bombay City	32·7	29·6	37·7
Average for Presidency	38·8	33·2	28·0

The low proportion of the infantile deaths under the age of 1 month in Bombay City as compared with mofussil districts may be explained by the fact that many mothers leave Bombay for confinement and return when the child is over one month old.

32. *Deaths by castes or classes.*—Deaths by classes and by sex in each Collectorate are recorded in Annual Form No. V, Appendix IV.

33. *Deaths according to causes.*—The following table shews the number of deaths in 1920 and the ratio per 1,000 of population arranged according to causes and contrasted with the returns for 1919 and with the mean of the preceding five years :—

	1920.		1919.		Mean for five years.	
	Number.	Ratio.	Numebr.	Ratio.	Number.	Ratio.
Cholera	2,047	·10	51,551	2·63	19,521	1·00
Small-pox	3,536	·18	6,232	·32	4,421	·23
Plague	1 ,857	·71	9,626	·49	75,062	3·83
Fever	266,092	13·58	274,759	14·03	468,976	23·94
Dysentery and diarrhœa ..	29,895	1·53	38,317	1·96	34,518	1·76
Respiratory diseases ..	96,486	4·93	98,633	5·04	90,445	4·62
Injuries	7,721	·39	7,896	·40	7,903	·40
Other causes	141,662	7·23	150,156	7·67	164,042	8·38
Total ..	561,296	28·65	637,170	32·54	864,888	44·16

For Comments on the causes of deaths—*vide* Section VI.

34. " Influenza " appears for the first time as a separate heading as a cause of death having been introduced into Registration from 1st January 1920.

35. *Cantonments in Quasi-Native States.*—The total number of births in those cantonments which are situated in Quasi-Native States during the year 1920 was 2,095 against 2,102 in 1919, the birth-rate being 20·93 per 1,000 against 21·00 in 1919. There were 2941 deaths equal to a ratio of 29·38 per mille against 3,329 and a ratio of 33·26 in 1919. The statistics are tabulated below :—

Statement showing the names of Cantonments with population and deaths from diseases for the year 1920.

Cantonments.	Population according to Census of 1911.	Area in square miles.	Average population per square miles.	Number of births.	Ratio of births per 1,000 of population.	Number of deaths from									Ratio of deaths per 1,000 of population.								
						Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.	Injuries.	Other causes.	All causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.	Injuries.	Other causes.	All causes.
Aden Municipal limits	40,684	67 1⅝	602	1,055	25·93	..	4	..	172	976	..	16	733	1,901	..	·10	..	4·23	23·99	..	·39	18·02	46·73
purely civil population of Cantonments.	307	7 1⅜	42	18	58·63	..	..	..	20	..	..	..	10	30	..	..	..	65·15	..	..	..	32·57	97·72
Baroda ..	3,478	1	3,478	31	8·93	..	..	..	12	1	..	1	23	37	..	..	..	3·45	·29	..	·29	6·61	10·64
Deesa ..	7,129	5	1425·8	111	15·57	..	..	..	87	..	..	..	8	95	..	..	..	12·20	..	..	..	1·12	13·32
Mhow ..	22,360	6·5	3,440	200	8·95	..	2	..	169	..	..	..	178	349	..	·09	..	7·56	..	..	..	7·96	15·61
Nasirabad ..	16,144	8·58	1,881	463	28·68	..	1	..	203	14	52	4	99	373	..	·06	..	12·57	·87	3·22	·25	6·13	23·10
Neemuch ..	9,786	4·52	2,165	217	22·17	..	1	..	73	7	35	..	35	151	..	·10	..	7·46	·71	3·58	..	3·58	15·43
Rajkot	201	·56	359	..	..	..	..	..	2	..	..	..	3	5	..	..	..	9·95	..	..	..	14·92	24·87
Total ..	1,00,089	100·87	992	2,095	20·93	..	8	..	738	998	87	21	1,089	2,941	..	·08	..	7·37	9·97	·87	·21	10·88	29·38

36. *Rainfall.*—The monsoon opened at the south end of the Konkan coast in the first week of June and marching slowly upwards reached as far as Bombay. It then spread to the north and into the interior and gave general rain except in east of Deccan and Karnatak. At the same time a cyclonic storm burst on the Kathiawar Coast and gave heavy rain over that area and in Northern Guzerat. The Konkan and parts near the Sahyadris continued to receive rain till the close of the month of June. The rest of the area received rain in the 4th week of June.

The rainfall was below the average during July, August and September. The defect in average rainfall in 1920 resulted in the prevalence of famine and scarcity in certain Districts (Ahmednagar, Satara, Poona, Sholapur, Belgaum, Bijapur and Nasik).

37. The prices of food-grains were abnormally high and Government granted temporary and provisional allowance on a more liberal scale to Government servants in lieu of war allowance during the year under report.

SECTION VI.

HISTORY OF CHIEF DISEASES.

CHOLERA.

38. In contrast with the year preceding the incidence of cholera for the year under report was unusually low.

The number of deaths from the disease was 2,047 against 51,551 in 1919 and a decennial mean of 19,455. The death rate was ·10 against 2·63 in 1919 and a quinquennial mean of 1·00.

The following table gives the deaths recorded each year for the last 20 years :—

Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.	Year.	No. of deaths.
1901 ..	13,600	1906 ..	46,119	1911 ..	5,817	1916 ..	19,841
1902 ..	3,229	1907 ..	7,656	1912 ..	64,505	1917 ..	17,003
1903 ..	1,825	1908 ..	1,759	1913 ..	5,134	1918 ..	8,834
1904 ..	13,156	1909 ..	28,714	1914 ..	17,779	1919 ..	51,551
1905 ..	5,396	1910 ..	3,694	1915 ..	377	1920 ..	2,047

39. Of the total deaths only 236 were recorded during the first half of the year. These were mostly in Satara and Ratnagiri Districts. In the later half of the year the remainder (1811) occurred and infection was chiefly in the Districts of Poona, Satara, Belgaum and Bijapur. Bombay City returned 98 of its total 119 cholera deaths in June-July.

Annual Form No. VII will shew that all districts of the Presidency proper with the exception of Kanara, Broach, Ahmedabad and Panch Mahals, reported deaths from this cause but such intensity as the year's cholera shewed was mainly localised. In addition to the districts named, all districts in Sind escaped—11 districts in all against 15 affected.

40. Intensity was chiefly manifest in the following :—

Satara District returned a total of 1,083 deaths equal to a death-rate of 1·00. Of other districts Poona returned 191 deaths, Ratnagiri 96, Sholapur 62 and Ahmednagar 5 and in the Southern Registration District Bijapur recorded 210 deaths. Of the towns, 5 out of a total of 15 infected, shewed death-rates exceeding 1·0, *viz.*, Gokak (4·64) Manmad (2·88), Wai (2·75) Baramati (2·75) and Trimbak (1·47).

41. The Deputy Sanitary Commissioner, Central Registration District attributes the importation of infection into Satara (Suburban limits) by immigrants from Bombay in the month of March and the further spread along the river Krishna, probably through infection of its water. The infection of Poona taluka he traces through Shelgaum village in Indapur taluka. The Deputy Sanitary Commissioner, Southern Registration District, reported one case in Dharwar in March imported from Galburgaha in the Nizam's States ; cholera assumed epidemic form in July and the disease did not die out till November. The rivers Krishna and Dudganga he states played an important part in distribution of infection but the infected villages fall mainly into two groups around two distributing foci, *viz.*, Chandur village in Chikodi taluka and Badgi in Bilgi Petha.

DYSENTERY AND DIARRHŒA.

42. Twenty-nine thousand eight-hundred and ninety-five deaths of which 16,084 were males and 13,811 females were recorded against 38,317 in 1919 and 38,481 the decennial mean. The death-rate was 1·53 against 1·96 in 1919 and 1·76. the mean of previous five years.

The number of deaths registered under Dysentery and Diarrhœa since 1909 is given below :—

Year.	No. of deaths.	Year.	No. of deaths.
1909	35,039	1915	31,707
1910	46,643	1916	34,187
1911	31,549	1917	36,321
1912	57,039	1918	32,058
1913	34,021	1919	38,317
1914	42,961	1920	29,895

43. The urban death-rate was 2·32 and the rural 1·37 against 2·93 and 1·77 respectively in 1919.

The following table gives the towns in which mortality under this head shows a marked increase or decrease. The high rates in Nasik and Trimbak are attributable to the influx of a large pilgrim population for the Sinhast Festival :—

Increase.			Decrease.		
Towns.	Death-rate.	Mean of previous five years.	Towns.	Death-rate.	Mean of previous five years.
Nasik	7·06	3·41	Poona	3·88	4·89
Trimbak	3·43	1·47	Kirkee Cantonment	3·10	4·92
Bhiwandi	4·22	2·03	Pandharpur	5·91	7·02
Wai	3·43	1·51	Gadag-Bettigeri	3·41	5·87
Islampur	4·67	1·63	Gokarn	5·09	6·78
Dakore	4·75	2·59	Honawar	4·37	5·02

44. *Dysentery.*—Under this separate heading 5,329 deaths were registered against 5,590 in 1919. The death-rate was .27 against ·28 in 1919. The urban death-rate was ·62 and the rural ·20 as compared with ·86 and ·17, respectively in 1919. Four towns returned death-rates above 2 per 1,000, *viz.*, Gokarn (4·71), Borsad (2·62), Thana (2·31) and Nasik (2·17).

45. *Diarrhœa.*—Twenty-four thousand five hundred and sixty-six deaths were recorded against 32,744 in 1919. The death-rate was 1·25 against 1·67 in 1919. The urban death-rate was 1·70 and the rural 1·17 against 2·08 and 1·59 in 1919. Nine towns returned death-rates above 3 per 1,000 *viz.*, Pandharpur, (5·67), Nasik (4·88), Islampur (4·67), Gokak (4·50), Baramati (3·74) Dakore (3·60) Wai (3·43), Poona (3·36) and Nasirabad (3·30).

Fevers.

46. Two lakhs sixty-six thousand and ninety-two deaths (139,596 males and 126,496 females) were recorded as due to fevers against 2,74,759 in 1919 and a decennial mean of 3,62,325. The death-rate was 13·58 against 14·03 in 1919 and a quinquennial mean of 23·94 (13·48 excluding 1918 the Influenza year).

The annual mortality attributed to fevers since 1909 is given in the following table :—

Year.	No. of deaths.	Year.	No. of deaths.
1909	223,888	1915	224,797
1910	263,528	1916	262,401
1911	223,027	1917	298,919
1912	286,321	1918	1,284,013
1913	246,319	1919	274,759
1914	259,164	1920	266,092

47. *Distribution.*—*Vide* Annual Form No. IX. The highest death-rates were recorded in the Collectorates of Thana (27·45), Kolaba (23·69), Ahmedabad (18·06), Nasik (17·64), Larkana (17·12), Satara (15·65), Poona (14·84), Kanara (14·60), Kaira (14·18), Sukkur (13·94), Panch Mahals (13·65) and Hyderabad (13·07).

The urban fever death-rate was 10·27 and the rural 14·23 against 9·91 and 14·82, respectively, in 1919. The highest urban death-rates in the Presidency proper were recorded in Sholapur (34·46), Barsi (27·91), Dohad (27·20), Nadiad (26·05), Dhandhuka (25·13), Pandharpur (24·30), Kurla (23·54), Viramgaon (23·54), Panwel (22·72), Anand (21·99), Alibag (21·73), Ankleshwar (18·42), Thana (17·21), Dakore (17·34), Bhusawal (16·76), Malegaon (16·65), Satara (16·08), Trimbak (15·94) and Lonavla (15·94).

In Sind the highest death-rates were recorded in Kambar (28·16), Nawabshah (26·51), Garhiyasin (23·06), Rohri (21·98), Ratodero (20·51), Larkana (19·19) and Sukkur (19·13).

48. The details of sub-headings of deaths from fever are as follows.

49. *Malaria.*—Thirty-three thousand nine hundred and four deaths were recorded against 26,841 in 1919. The death-rate was 1·73 against 1·37 in 1919.

For Western, Central, Southern, Guzerat and Sind Registration Districts the total deaths were 118, 11,029, 8,087, 427, and 13,951 as compared with 496, 10,341; 8,570, 928 and 6,260, respectively, in 1919.

The urban and rural death-rates were 1·00 and 1·87 respectively against 1·18 and 1.41 in 1919. The highest urban death-rates were recorded in Lonavla (12·61), Mirpurkhas (12·36), Kapadvanj (11·05), Kotri (10·34), Hyderabad (7·85), Umarkote (7·34), Tando Adam (6·49), Kumta (5·80), Larkana (4·66), Nawabshah (4·24), Garhiyasin (4·05), Honawar (3·56) and Khed (3·48).

For rural areas the highest death-rates were recorded in the districts of Poona (7·39), Sukkur (7·00), Kanara (6·07), Larkana (4·98), Karachi (4·57), Jacobabad (4·30), Ahmednagar (3·53), Nawabshah (3·41) and Thar and Parkar (3·23).

50. *Measures against the disease.*—For the treatment of sufferers two Sub-Assistant Surgeons were appointed on special duty—one for Kolaba and one for Panch Mahals District and four touring Medical Officers were employed—2 for Surat District and 2 for Ratnagiri.

In Sind 3 Sub-Assistant Surgeons were appointed for Nawabshah District and 3 touring Medical Officers were employed in Karachi District.

Two thousand six hundred and sixty five lbs. of quinine against 2,827 in 1919 was sold or distributed free in the Presidency and Sind by the District Local Boards, Municipalities and Post Offices.

51. During the year Rs. 322,373 were spent on anti-malarial measures against 218,716 in 1919. Of this sum Rs. 108,535 came from Provincial, Rs. 199,066 from Municipal and Rs. 14,772 from Local Board Funds.

The chief items in Provincial expenditure were :—

(*a*) a grant of Rs. 25,000 to the Bombay City Municipality and Rs. 37,015 to the Hyderabad Municipality.

(*b*) Rs. 3,004 pay, allowances, etc., of medical officers deputed on anti-malarial duty.

(*c*) Rs. 42,166 for the purchase of quinine.

The expenditure in Bombay City amounted to Rs. 35,222. Of this sum Rs. 17,938 were establishment charges, Rs. 1,569 were spent on disinfectants, Rs. 1,303 contingencies, Rs. 2,865 on filling in wells, etc., or covering them with concrete, while Rs. 11,548 were spent on providing new pattern gratings and frames for storm water drains.

In mofussil municipalities Rs. 1,56,874 were spent on filling up mosquito breeding grounds ; the chief amounts being Rs. 99,488 by the Karachi Municipality ; Rs. 15,000 by Ahmedabad, Rs. 34,934 by Hyderabad and Rs. 4,454 by the Municipalities in the Larkana District. Of the latter sum Rs. 4,169 was a grant from the Sanitary Board for filling in insanitary pits within the Kambar Municipal limits. The municipalities in Satara, East Khandesh and Broach spent Rs. 850, 400 and 520, respectively, on this account.

The District Local Board, Broach, received a grant of Rs. 6,400 from the Sanitary Board which amount was expended in the filling up a large pit in Amod town.

As regards the expenditure on oil and disinfectants for the treatment of mosquito breeding grounds Rs. 2,388 were spent by the mofussil municipalities.

Municipalities spent Rs. 3,587 on the free distribution of quinine against 3,690 during the last year. The largest amount Rs. 1,500 was spent by the Karachi Municipality while the municipalities in Poona and Ahmedabad Districts spent Rs. 527 and 670, respectively. District Local Boards incurred an expenditure of Rs. 6,760 under this head ; the chief amounts being Rs. 650 (Larkana), Rs. 622 (Hyderabad), Rs. 1,164 (Ahmedabad), Rs. 600 (Kaira), Rs. 631 (Thana), Rs. 547 (Broach) and Rs. 2,050 (Dharwar).

On the quininization of schools, Broach, Bijapur and Dharwar Municipalities spent Rs. 225, 146 and 458 while the District Local Boards, Belgaum, Bijapur and Ratnagiri and the Sanitary Committees in Dharwar spent Rs. 250, 241, 150 and 326, respectively. The total expenditure under this head was Rs. 1,206 in urban and Rs. 734 in rural areas. A large amount of quinine tabloids was distributed free

by Government to the general public and school children in Sind through the agency of village officers and school masters.

52. *Enteric Fever.*—Two thousand five hundred and thirty-six deaths were registered against 2,749 in 1919. For the Western, Central, Southern, Guzerat and Sind Registration Districts the total deaths were 0, 313, 1,393, 38 and 659 as compared with 1,310, 1,342, 26 and 624, respectively, in 1919. In Bombay City 133 deaths were reported against 116 in 1919.

The highest death-rates for urban areas were recorded in Shikarpur (6·46) Gokak (2·32) and Poona (1·24).

53. *Measles.*—Two thousand seven hundred and seventy-one deaths were registered compared with 6,279 in 1919. The total deaths in the Western, Central, Southern, Guzerat and Sind Registration Districts were 208, 606, 1,497, 128 and 215, respectively, as compared with 446, 1,370, 1,219, 2,100 and 584 in 1919. In Bombay City 117 deaths were reported against 560 in 1919.

The highest death-rates for urban areas were recorded in Bagalkot (2·72) Dohad (2·04), Guledgud (1·64), Ranebennur (1·19) and Sholapur (1·14).

54. *Relapsing Fever.*—Only 48 deaths were reported—43 from Bombay City, 4 from Surat City and 1 from Karad Town. The total for the previous year was 152.

55. *Kala Azar*—Two deaths were reported—one from Bombay City and one from Ahmedabad City.

Plague.

56. Thirteen thousand eight hundred and fifty-seven deaths (6,876 males and 6,981 females) were recorded against 9,626 in the previous year. The quinquennial mean death-rate was 3·83.

The annual number of deaths since 1909 is given below :—

Year.	No. of deaths.	Year	No. of deaths.
1909	24,319	1915	43,824
1910	25,043	1916	79,507
1911	10,399	1917	162,874
1912	28,984	1918	79,478
1913	25,288	1919	9,626
1914	20,060	1920	13,857

57. *Distribution.*—Five districts contributed 12,434 of the total deaths, *viz.*, Dharwar, East Khandesh, Satara, West Khandesh and Belgaum. Generally the later months of the year show the chief incidence. An exception is East Khandesh which recorded the highest mortality in February and March. Dharwar showed the highest death-rate (4·01), and Sholapur, Hyderabad and Sukkur the lowest (0·01).

58. In Dharwar District 4,106 deaths were recorded the death-rate being 4·01 against 2·38 in 1919 and the quinquennial mean 6·03; all talukas of that district with the exception of Nargund Peta and Ranebennur and Navalgund T. C. were attacked; Hubli, Bankapur, Kalghatgi and Kod Talukas and Gadag T. C. suffered most.

In Belgaum District 1,128 deaths were recorded. The death-rate was 1·20 as against ·61 last year and a quinquennial mean 6·97. Belgaum, Sampgaon, Khanapur, Chikodi and Hukeri Talukas and Chandgad Peta were affected.

In these two Districts special anti-plague measures were in operation of which an account is given below. The total plague deaths for these two areas combined was 5,234 as compared with 12,753 the average for the previous 5 years. 15,012 persons were inoculated in Dharwar and 1,341 in Belgaum District by the Medical Officers of the staff and other practitioners.

59. In Western Registration District 4,995 plague deaths were recorded against 2,951 last year. In East Khandesh District the disease continued throughout the year all talukas being affected. This district recorded 3,243 deaths or a death-rate of 3·14 against ·42 last year and a quinquennial mean 4·33. Plague commenced in September 1919 and was at its height in March 1920. Seventeen out of 77 market places were infected.

In West Khandesh District, 1,279 deaths were recorded the death-rate being 2·20 against 3·78 last year and a quinquennial mean of 7·15. Out of 1,096 villages only 51 and of 39 market places 12 were affected but the disease was in epidemic form in the first four months of the year and again with less severity from August to December. One thousand two hundred and twenty inoculations were done among the prison population of Dhulia.

60. In the Central Registration District, 2,737 deaths were recorded equal to a death-rate of 0·54.

In Satara District, there were 2,678 deaths, out of which 1,246 spread over the year were recorded in Shirala Peta and 1,111 in Walwa Taluka (deaths in all months except May and June). Tasgaon, Khanapur, Koregaon and Satara Talukas were practically free. September was the month of highest incidence in mortality. Out of 76 market places 9 were affected.

In Poona District 50 deaths were recorded against 74 last year, and the death rate was ·04 as compared with ·07. Other districts were practically free.

61. Gujarat Registration District was all but free from plague, only 2 deaths being reported 1 in Kaira and 1 in Ahmedabad Districts.

62. In Sind there were 386 deaths out of which 311 occurred in Karachi Town distributed through all months of the year. The death-rate amounted to 2·22.

63. *Anti-Plague measures.*—De-ratization operations on an extended scale were carried on in Belgaum and Dharwar Districts as per Government Order, General Department, No. 10858 of 12th December 1919. The scheme was prepared by Dr. Chitre and the undersigned on the outlines on record in this office drawn up by Lieut.-Colonel F. H. G. Hutchinson, I.M.S., and the services of Dr. C. Strickland, M.A., B.C., and Officer of experience in epidemiology were obtained for its execution. The principle underlying the scheme was that whereas isolated anti-rat measures have been proved to effect a reduction in plague in the towns where they have been carried out, cumulative and interactionary in addition to combined benefits are to be anticipated when all centres of population and trade within a large area of country are dealt with. In other words each town and grain centre within that area was to be rendered incapable of developing epizootic rat plague and its sequel epidemic human plague with the objects (1) that it should itself escape epidemic and (2) it should not become a focus of infection for its neighbours.

Belgaum and Dharwar Districts were selected as they have never been entirely free from epidemic plague. Since its first appearance the disesase has caused the death of 4,79,854 people, an average of nearly 20,000 per annum or 10 per mille of their population, while in the years 1901 to 1904 2,13,420 people died equal to 10 per cent. of the population. The saving of economic loss by the destructive activities of the rat was but an incident though an important one, in the scheme.

A special report on the operations has been submitted by Dr. C. Strickland but the following brief extract is called for here :—

> "Before the commencement of these operations Dr. G. D. Chitre, L.M. & S., Officer in charge Plague Prevention Inquiry, made several experiments about the efficacy of traps and devised one with certain modifications to the Wonder trap prepared by Henry Marty of France. He also trained the staff.
>
> "Local bodies helped in every way and appreciated the work while the ryots have submitted with scarcely any objection to the unpleasant consequences of poison baiting.
>
> "Intimation of plague infection was very faulty and this might prove an important stumbling block to ultimate success.
>
> "The total cost of the work for 1920 was roughly 1¼ lakhs. The total number of rats destroyed during the period was 453,181 by trapping and 474,800 by baiting. The working cost of the operations came to Re. 1 for 35 rats killed.

"The scheme was composed of two chief ingredients (*a*) work in the carrying over places and (*b*) that in 15 big grain centres.

Thirty places were marked down as likely to carry over.

Note.—In the interval between two epidemics infection simmers or remains latent in a few towns and villages and these are aptly described as "carrying over" villages.

"A great deal of reliance was placed on starting operations by January 1st, but unfortunately work could not be begun in them, if at all, till very late in the off season.

Twenty of them only had any operations during the off season, while 10 had none at all.

Of the 20—

(*a*) Three, the big towns Belgaum, Dharwar and Hubli, had a considerable amount of work conducted in them and the results were excellent even though they were surrounded with infected villages later in the year.

(*b*) One, the big town of Gadag Bettegeri, had a less amount of work, started very late in the off-season and the results were not so good, as it suffered a small epidemic (4 per mille) in the plague season.

(*c*) One large village, Khanapur, had considerable work conducted in it with old inefficient traps and the results were poor.

(*d*) One village had no other measures than a few inoculations and the results were poor.

(*e*) Two villages had poison baiting in May and June and the results were good, plague not carrying over.

(*f*) Twelve villages had operations started as late as June, and even then the work in some cases was purely nominal. In the sequel 6, or 50 per cent. developed plague, the remainder keeping sterile of plague.

"In general the results proved that operations started early, and conducted on a considerable scale are efficacious whereas poison baiting started as late as June is not of much avail.

Of the 10 (which had no operations in the off-season at all, 7 developed plague or 70 per cent.

It is satisfactory at any rate to note that the places operated in during the off-season although in some cases nominal, showed more satisfactory results than those which were not operated in, although the attempt in the former case to prevent carrying over *completely* was not successful.

Big Grain Centres.—Fifteen were indicated in G. R. 10858 of them—

(*a*) Five were operated in as they had been marked down to carry over, and apart from the fact that they either did carry over or were reinfected, the results were excellent in four as the infection could not do more than make a slight inpression although these towns were surrounded by heavily infected villages. The result in the remaining one place was poor owing to inefficient traps being used.

(*b*) Seven did not develop infection during the year. They were all operated in sooner or later.

Places becoming important on the supervention of plague in the same taluka in the off-season.—Forty-nine places in this class came on to the register.

The influence of operations seemed very encouraging, as only 10 per cent. of those in which operations were undertaken developed plague while 75 per cent. of those in which no operations were started did so.

Places becoming important on the supervention of plague in the same taluka in the plague season.—Sixty-two places in this class came to the register.

The influence of the operations seemed encouraging as only 4 per cent. of these places which were operated in developed plague while 24 per cent. of those not operated in did so.

"Belgaum Cantonment showed very satisfactory results after constant work in it, as in spite of plague in the surrounded villages only one imported case occurred in the plague season, while of the remaining 10 places, all operated in, none become infected.

"No conclusion of any scientific value could be drawn from the data, but the results appeared for the most part satisfactory; no place which was operated in after it became infected developing severe infection.

"Of a considerable number of places operated in after rat mortality had been reported not one developed human plague.

"Altogether 254 places were registered in this class and 354 monthly operations performed during the year in the 188 places in which any work was conducted.

"Shahapur in Sangli State, being in the very neighbourhood of Belgaum Town, was included in the operations. Trapping continued for seven months and though it developed plague early in the plague season this never assumed serious proportions; only 27 cases being reported out of a population of about 10,000."

"The results of the experiment for the year's working seem to indicate that putting rat destruction on a real scientific basis has produced results far in excesss of the most sanguine anticipation. These obtained in the big towns read in conjunction with those from the previous work in Satara are most encouraging. One is encouraged to think that plague now can be controlled most effectively by the new method; it is possible that the new type of traps and the systematic use of a most efficient poison provide means to eradicate plague infection wherever it is found to exist."

Referring to the proposal for subsequent limitation of the scheme Dr. Strickland remarks: "it was pointed out that it had not been possible to test the prevision of the scheme during 1920, as a measure for the abolition or for at least the control of plague. The scheme was a big experiment based on a mass of recently acquired knowledge principally in the bionomics of the rat and it had a reasonable chance of success. The curtailment of the operations therefore means that the experiment, as an experiment is given up in spite of its good chances of being successful and when the large capital expenditure necessary for it had been incurred.

The curtailment of the provision made for the operations has caused—

(1) the reduction of the area being dealt with,

(2) cessation of work in the 15 big grain centres,

(3) the cessation of trapping; 18,000 traps now lying idle,

(4) the cessation of the work before control observations could be made during a plague year.

The change came just at the time of the off-season when the most strenuous efforts have to be and were being made to eradicate plague from the comparatively few carrying over places. In these work is being continued. From the point of view of saving of life due to operations even if it be only a nominal amount it is sufficient return for expenditure. It has been shown that the saving of 350 lives per annum justifies an expenditure of 2 lakhs.

It is to be hoped therefore that Government will see fit to give the experiment a fair trial as it has every chance of success if placed on proper footing again."

64. *Anti-Plague measures elsewhere.*—Rat destruction was carried on by trapping by the Dhulia Municipality and the total number of rats destroyed was 136,739 but it is now stopped as the Jains are opposed to rat killing.

Rat destruction by trapping was carried on throughout the year at Malegaon in Nasik District with the result that 39,250 rats were destroyed. Only one plague death was recorded.

Trapping operations were carried on by the Satara Municipality like the last year and the number of rats destroyed was 23,878 in the City and 1,282 in Jakatwadi and Gadkariali. No plague case occurred except one imported from Mahableshwar. The Municipality has now resolved to stop the operations for want of funds.

Trapping was continued throughout the year in Poona City as during last year. Some 32 sporadic cases of plague occurred and as soon as reports were to hand operations were concentrated round the affected areas and the disease did not spread throughout the city in its epidemic form. It was recommended that the operations be extended to Cantonment and other villages within a 5 miles radius but as the Municipality expressed its unwillingness to continue to bear a share of the cost, operations were altogether discontinued from 31st December 1920. The total number of rats destroyed was 157,275 during the period.

Trapping was continued in Mahableshwar. The total number of rats destroyed was 2,158. There were 24 cases and 15 deaths. One thousand six hundred and thirty-four persons were inoculated. Three cases and 1 death were reported among the inoculated.

In Sukkur District, Shikarpur town was affected in March but further spread of the disease was stopped by active measures taken by the Municipality. These measures included prompt detection and removal to hospital of cases, inspection of trains from Karachi and rat destruction.

65. *Inoculation.*—Inoculation was availed of as one of the measures for the prevention of plague. Two temporary Assistant Surgeons and five temporary Sub-Assistant Surgeons were employed during the portion of the year, *i.e.*, when plague was prevalent. Inoculation was also performed by Medical Officers in charge, plague operations (Belgaum and Dharwar Medical Officers) of Jails, Dispensaries and Hospitals, and by private Medical Practitioners.

The total number of persons inoculated during the year under report was 49,117, 38,440 in British territory and 10,677 in Native States compared with 28,307 in the previous year.

By districts the number of operations were 15,012 in Dharwar, 6,985 in Satara, 3,061 in East Khandesh, 2,025 in Kanara, 1,341 in Belgaum, 1,274 in West Khandesh, 1,168 in Thana and the remainder were done in Kolaba, Ratnagiri, Bijapur Districts and in Bombay (4,518) and Karachi (983) Cities. Eight thousand five hundred and thirty-five inoculations were done among the prison population.

Sixty-eight cases were reported amongst persons who had been inoculated of which 34 proved fatal as compared with 43 cases and 20 deaths in the previous year.

Forty-seven were attacked within 14 days of inoculation and 26 of them died.

66. *Plague prevention laboratory.*—Work at the Plague Laboratory at Poona was continued on the lines stated in this Report for last year. Shorn of the details of observation, experiment and labour that all Research involves, some of the results of Dr. Chitre's year's work may be summarised as follows :—

Rat-poison.—Further experiments to arrive at specifications for commercial Barium Carbonate as a rat-poison tend to shew that (in addition to being free from repellants such as Sodium Carbonate, Barium Sulphide, etc.), 80 per cent. is the minimum content of pure Barium Carbonate that should be demanded.

The addition of a weak Boric (1 in 40) or Carbolic (1 in 40) lotion to dough used as poison medium preserves the attractiveness of the bait. After 3 days keeping such baits though less attractive than freshly prepared dough are many times more attractive than untreated bait of the same age.

Traps.—Samples of a grip trap known as the " Zip " shewed a very high efficiency in catching :— equal to more than twice that of the improved French cage trap pattern under Laboratory conditions. The use of trap of this pattern is indicated towards the finish of a vigorous rat campaign.

The effect of oiling, handling, etc., on the attractiveness of traps for rats was investigated in series of experiments. Taking the efficacy of control

(untouched) traps at 100, the smell of the human hand reduces the figure to 79 ; smearing with vaseline to 30 and with Oleum Arachis Hypogea (oil of ground nut) to less than 20.

The advantage of traps with the flap provided with a counterpoise as compared with a flap actuated by a spring was shewn to be in the ratio of 100 to 53.

It is of interest to note that the opinion arrived at in the Laboratory after prolonged and careful experiments in previous years (see Report for 1919) as to the relative efficiency of the "Wonder" Trap (as modified and improved at the Laboratory) over other patterns of cage trap were confirmed under natural conditions in the work of the Belgaum-Dharwar Plague Operations.

Infestation of Ships.—In October Dr. Chitre and his staff proceeded to Bombay to carry out investigations regarding access of rats to vessels in Dock (Government Order No. 7718 of 21st July 1920). This work occupied him over the end of the year and will form the subject of a special Report to Government.

SMALL-POX.

67. Three-thousand five hundred and thirty-six deaths from small-pox were registered against 6,232 in 1919 and a decennial mean of 5,180. The death-rate was ·18 against ·32 in 1919 and ·23 the quinquennial mean. By sex, 1,880 were males and 1,656 females.

The annual mortality since 1909 is given below :—

Year.	No. of deaths.	Year.	No. of deaths.
1909 ..	.. 5,019	1915 ..	.. 1,425
1910 ..	.. 4,600	1916 ..	.. 3,289
1911 ..	.. 4,727	1917 ..	.. 3,095
1912 ..	.. 6,331	1918 ..	.. 8,063
1913 ..	.. 9,833	1919 ..	.. 6,232
1914 ..	.. 4,209	1920 ..	.. 3,536

68. *Distribution.*—Detailed figures are given in Annual Form No. VIII. All districts with the exception of Broach and Panch Mahals reported deaths. Only Kanara District recorded a death-rate (1·44) exceeding one per mille of population. The next districts in order of severity of incidence were Hyderabad (·58), Karachi (·55), Larkana (·56) and Nawabshah (·49). Two-hundred and thirty-seven registration circles and 953 villages were infected against 267 and 1,496, respectively, in 1919.

69. Amongst towns, Matiari recorded the highest death-rate 4·62. Other towns shewing high rates were Kumta (2·90), Hyderabad (2·79), Kotri (2·61) and Nadiad (1·95).

Of the 3,536 deaths from small-pox, 610 were in infants under one year and 1,071 in children between one and 10 years of age.

Three-thousand and fifty-five of the total deaths occurred in the first half and 481 in the second half of the year. March returned the highest number of deaths—656.

70. The Deputy Sanitary Commissioner, Central Registration District, reports that the infection in most of his area was imported from the surrounding Native States and in the case of Ratnagiri district from Bombay.

71. The officers of the Department enquired into the vaccinal state of 650 cases of small-pox with the following results :

Two-hundred and sixty-three were found to have been vaccinated of which number 15 died ; of the 387 unvaccinated 66 died. The case mortality was therefore 5·7 among vaccinated and 17· among unvaccinated. The average age of vaccinated persons attacked by small-pox was 13 and of unvaccinated persons 5, while of those who died the average age among the vaccinated was 12 and the unvaccinated 5.

Respiratory Diseases.

72. Ninty-six thousand four-hundred and eighty-six deaths (53,196 males and 43,290 females) were recorded as compared with 98,633 in 1919 and a decennial mean of 75,965. The death-rate was 4·93 against 5·04 in 1919. The mean of the previous five years was 4·62 (or 4·07 excluding 1918 the year of epidemic Influenza). Comparison with the figure for the year under review indicates that Influenza still lingers.

The annual number of deaths registered since 1909 is given in the following table :—

Year.	Number of deaths.	Year.	Number of deaths.
1909 ..	.. 53,433	1915 ..	.. 63,364
1910 ..	.. 59,880	1916 ..	.. 79,882
1911 ..	.. 51,470	1917 ..	.. 90,667
1912 ..	.. 70,712	1918 ..	.. 119,680
1913 ..	.. 59,418	1919 ..	.. 98,633
1914 ..	.. 65,941	1920 ..	.. 96,486

The highest death-rates were returned from the collectorates of Kaira (11·97), Surat (11·64), Ahmedabad (10·16), Broach (9·82), Poona (6·30), Ratnagiri (4·81), Nasik (4·56), Ahmednagar (4·50), East Khandesh (4·30), Panch Mahals (4·06), Dharwar (3·45), Belgaum (3·25), and West Khandesh (3·17). Bombay City recorded a death-rate of 21·02 from this cause.

73. For rural areas the death-rate was 3·43 against one of 12·65 for urban areas as compared with 3·29 and 14·02 respectively in 1919. The excess in urban over rural areas is in part due to greater accuracy in registering cause of death. This applies also to a number of other diseases returned under fever in rural registers. The highest death-rates for urban areas were recorded in Deolali Cantonment (30·32), Ahmedabad (23·08), Poona City (19·82), Kaira (16·86), Nagar (16.38), Broach (15·69), Surat (14·43), Sehwan (14·31), Kapadvanj (14·24), Kirkee Cantonment (13·97), Jambusar (12·35), Nadiad (11·63), Dakore (11·56), Nasik (11·52), Nagar Cantonment (11·49), Gokarn (10·75), Thana (10·91), and Matiari (10·18).

74. *Phthisis.*—Seventeen-thousand four hundred and fifty deaths from phthisis were registered equal to a death-rate of ·89 for the Presidency as a whole. The corresponding figures for 1919 were 18,207 and ·93 respectively. In the Western, Central, Southern, Guzarat and Sind Registration Districts, the total deaths attributed to this cause were 2,199, 5,238, 2,437, 5,298 and 672 compared with 2,554, 5,329, 2,310, 4,752 and 796 in 1919, respectively. In Bombay City 1,606 deaths were registered equal to a death-rate of 1·67 against 2,466 and 2·54, respectively in 1919.

The urban death-rate was 2·02 and the rural ·67 against 2·42 and ·64 in 1919. The highest death-rates for urban areas were recorded in Alibag (5·36), Ahmedabad (5·01), Hyderabad (4·94), Thana (4·75), Surat (4·27), Nadiad (4·05), Kapadvanj (404), Poona (3·61), Chiplun (3·51), Ranebennur (3·38) and Satara (3·21).

75. *Pneumonia.*— Twenty-thousand and sixty-seven deaths were registered equal to a death-rate of 1·02. The corresponding figures for previous year were 23,369 and 1·19 respectively. For the Western, Central, Southern, Guzarat and Sind Registration Districts, the total deaths were 484, 2,103, 285, 4,125 and 1,330 respectively, compared with 2,982, 315, 4,653, 252 and 2,304 in 1919. In Bombay City 11,740 deaths were registered equal to a death-rate of 12·19 against 14,736 and 15·29 respectively in 1919.

The highest urban death-rates were recorded in Deolali Cantonment (21·17), Poona (10·89), Matiari (8·02), Ahmednagar (8·00), Nadiad (7·11), Sehwan (6·95), Surat (6·62), Kirkee Cantonment (5·54), Kalyan (4·68), Gadag Bettigeri (4·11) Thana (3·53), Bandra (3·45), Bhiwandi (3·16), Baramati (3·14) and Tatta (3·05).

Influenza.

76. From the 1st January Influenza was introduced as a new and separate Heading in the Registers of Deaths and separate figures compiled from the monthly Returns from Districts are shewn for the first time in this Report. Prevalence is reported on all sides to be more than in the previous year and there is reason

to believet hat the special Influenza figures hereunder do not fully represent the extent of the disease. Witness the high "Fever" death-rate in comparison with that for previous years (excluding 1918) side by side with the fact that the year under report was not marked by the prevalence of any disease that would swell the "Fever" figures and was one of comparatively low total mortality.

77. The following statement gives the total number of deaths and the death-rate per mille of population by Registration Districts from Influenza :—

Registration Districts.	No. of deaths.	Death-rate.
Western Registration District	4,753	1·19
Guzerat " "	3,912	1·40
Southern " "	3,779	1·16
Central " "	2,117	0·42
Sind " "	552	·16
Bombay City	1,577	1·64
Total ..	16,690	·85

78. Influenza was prevalent in all the Collectorates of Guzarat Registration District. Cases were reported from the 1st month of the year. In Surat, Broach and Kaira Districts mortality was at its maximum in March and in the last eight months of the year, the cases were sporadic. In Halol and Jhalod talukas the disease was in epidemic form in November and continued so to the end of the year. In point of death-rate from this cause the Districts stand in the following order :—Kaira (2·64), Surat (1·54), Panch Mahals (·93), Broach (·49) and Ahmedabad (·42).

The Deputy Sanitary Commissioner, Guzerat Registration District, writes :—

"From the reports of the Health Officers of Surat, Broach, Nadiad and Dakore a feature of this epidemic has been the large number of deaths among children between the ages of 1 and 10 years."

"Rural circles shew more fatal cases attributable to the more insanitary conditions prevailing in villages and to the want of medical attendance."

Surat District.—All talukas in this district except Pardi were affected. The total number of cases reported was 2,748, of which 1,011 proved fatal equal to a case mortality of 37 per cent. The proportion of male per hundred female deaths was 36·79.

Stock medicines were issued to the public in Surat town from important centres and pamphlets in which was described the method of nasal douching with salt solution were freely distributed. Special attention was paid to the general cleanliness in the town.

Broach District.—Broach and Ankleshwar Towns were affected to some extent. Practically speaking the rural circles were free though some sporadic cases occurred in Wagra, Jambusar and Hansot Rural Circles. Altogether five villages were affected. The number of cases reported from the whole District above towns included was 672 of which 150 proved fatal—case mortality 22·30. The infection would seem to have been brought by travellers from Bombay and Surat.

In Broach town measures on the same lines as at Surat were taken.

Kaira District.—This was the worst affected. The number of cases reported was 6,328 of which 1,827 proved fatal equal to a case mortality of 28·87. The number of villages affected was 161.

The Deputy Sanitary Commissioner writes :—

"This district is specially open to epidemic infection. It contains a famous shrine at Dakore visited by pilgrims from all parts of India and Anand, a big railway junction. The fact of severe epidemic prevalance in Borsad Taluka which adjoins Cambay State leads one to suspect a possibility of infection from the seal through Cambay."

In Nadiad Town in addition to the preventive and curative methods as carried out at Surat and Broach, Influenza vaccine was used but only 53 persons were inocculated.

Panch Mahals.—All rural circles in this district were affected except Dohad. In Halol Taluka the infection centred in and around the Shivrajpur Manganese Mines where 169 cases and 47 deaths among a population of 1,705 occurred. In all 27 villages were affected giving 1,013 cases of which 301 proved fatal equal to a case mortality of 29·71. Godhra and Jhalod talukas were very little affected only, 4 villages in the former and 5 in the latter reporting cases.

Ahmedabad District.—Influenza prevailed in all talukas of Ahmedabad except Gogo and Dhandhuka. Total of cases reported was 1,222, of which 353 proved fatal equal to a case mortality of 28·88. In all 28 villages were affected but Ahmedabad and Viramgam the two important commercial centres reported a large proportion of the cases.

79. In the Western Registration District Influenza was prevalent during the early part of the year. Thana was the worst affected, the disease being prevalent in all talukas of that district. The first case was reported from Umbergaon Peta on 1st January. The total number of deaths was 2,450 and the death-rate for the district 2·78.

Nasik District reported 1,252 deaths equal to a death-rate per mille of population of 1·39. The number of villages affected was 131. Yeola Taluka remained quite free. East Khandesh with 150 deaths was the District last affected in this Registration District.

80. *Belgaum District.*—At the end of 1919 Influenza was prevalent in Khanapur and Sampgaon Talukas and the disease continued in these talukas till December. By January 1920, Gokak, Belgaum and Chikodi shewed cases. The total number of deaths reported was 1,192 and the death-rate was 1·27. The disease was comparatively of a mild type.

Dharwar District.—One thousand and thirty six deaths were reported giving a death-rate of 1·01. There were cases throughout the year but the severety of the disease abated after the first four months.

Bijapur District.—In this district the total number of deaths reported was 909 of which Hungund Taluka contributed one-third. In other talukas infection was very mild. The case mortality was 36·89 and the percentage of male to female deaths was 79·64.

Kanara District.—In this district the total number of deaths reported was 642 equal to a death-rate of 1·49. The percentage of villages affected was 13·75.

81. In the Central Registration District there were 2,117 deaths recorded from Influenza, the death-rate being 0·42.

Poona District gave the highest mortality, *viz.*, 907 more than one-third of the total and prevalence was confined to the first part of the year. Next came Ratnagiri which reported 722 deaths and 21 of them were from Influenzal Pneumonia. The disease was of very much less severe in type than during the epidemic of 1918 and the cases occurred in more or less sporadic fashion.

In Mahableshwar in Satara District the incidence amounted to an epidemic and amongst the deaths some were due to sequelæ, *e.g.*, Broncho-Pneumonia. The Deputy Sanitary Commissioner attributes the importation of infection to visitors and coolies at the commencement of the hot season.

In other districts also there was some Influenza during the first part of the year but it was of a mild nature and cases occurred in sporadic form.

82. In Bombay City also Influenza prevailed causing 1,577 deaths. The death figure amongst males per 100 female deaths was 211—a high figure even when allowance is made for sex distribution of the population. Twenty-eight deaths were amongst Europeans and Eurasians.

83. In Sind Registration District there were 552 deaths due to Influenza against 1,008 in the preceding year. Four hundred and seventy of that number

occurred in Karachi City from which the total of 19 villages attacked may be said to have got the infection more or less directly. It is to be noted that there has been no remission in the presence of the disease in Karachi since the pandemic year. The type of disease in rural areas is described as mild.

84. Pamphlets were issued in affected places. Vaccine was not used.

INJURIES.

85. There were 7,721 deaths recorded, of which 4,402 were among males and 3,319 among females. The number registered in 1919 was 7,896 while the decennial mean is 7,641.

The number of deaths registered annually as due to injuries since 1909 is shewn below :—

Year.	No. of deaths.	Year.	No. of deaths.
1909 ..	.. 7,029	1915 ..	.. 8,113
1910 ..	.. 6,885	1916 ..	.. 8,096
1911 ..	.. 7,452	1917 ..	.. 7,650
1912 ..	.. 7,175	1918 ..	.. 7,761
1913 ..	.. 7,711	1919 ..	.. 7,896
1914 ..	.. 7,670	1920 ..	.. 7,721

86. Deaths by sexes are arranged under the various heads in comparison with those for 1919 in the following table :—

Causes.	Male.	Female 1920.	Total.	Male.	Female 1919.	Total.
Drowning	1,307	1,681	2,988	1,452	1,878	3,330
Poisoning	92	26	118	74	33	107
Hanging	151	59	210	163	83	246
Wounding	923	456	1,379	934	389	1,323
Wild beasts	37	12	49	41	11	52
Snake-bite	783	468	1,251	749	442	1,191
Rabies	129	77	206	173	88	261
Railway Accidents ..	163	25	188	118	34	152
Other Causes	817	515	1,332	768	466	1,234
Total ..	4,402	3,319	7,721	4,472	3,224	7,896

87. One thousand two hundred and fifty-one deaths were attributed to snake-bites against 1,191 in 1919. The highest number occurred in Ratnagiri (288); next in order were Thana (116), Satara (98) and Poona (64), while only two deaths were reported from Bombay City.

In the Southern Registration District in 18 cases the snake was identified as a cobra and the interval between the bite and death varied from one to five hours. One fatal case was reported to have been treated with permanganate of potash.

In Guzerat Registration District, 46 deaths were ascribed to the bite of the "black serpent", probably the black cobra, and in these the interval between the bite and death varied from 5 minutes to 18 hours.

88. Two hundred and six deaths were reported from rabies (129 males and 77 females) against 261 in 1919. The highest number (38) was reported from Ahmedabad District.

Among towns the highest number (16) was returned from Ahmedabad. Bombay City reported 12 deaths against 4 in 1919.

89. There were 500 suicidal deaths (285 males and 215 females) against 568 (290 males and 278 females) in 1919. The following table gives details of deaths by suicide in the districts returning the highest number :—

Name of district.	Deatils of deaths by suicide.				
	Drowning.	Poisoning.	Hanging.	Wounding.	Total.
Dharwar	31	1	29	1	62
Bijapur	15	5	31	1	52
Belgaum	21	2	16	2	41
Thana	19	2	31	2	45
Bombay City	17	29	5	3	54
Total for abovenamed areas ..	94	39	112	9	254

Other Causes.

90. One hundred and forty-one thousand six hundred and sixty-two deaths (71,888 males and 69,774 females) were registered as compared with 150,156 in 1919 and the decennial mean of 155,649.

The death-rate was 7·23 against 7·67 in 1919 and a quinquennial mean of 8·38.

The annual number of deaths registered under this head since 1909 is as follows :—

Year.	Number of deaths.	Year.	Number of deaths.
1909 ..	.. 128,495	1915 ..	.. 138,006
1910 ..	.. 149,735	1916 ..	.. 165,382
1911 ..	.. 130,871	1917 ..	.. 181,877
1912 ..	.. 162,143	1918 ..	.. 184,787
1913 ..	.. 133,815	1919 ..	.. 150,156
1914	.. 159,720	1920 ..	.. 141,662

91. *Deaths from child-birth.*—Four thousand one hundred and sixty-three deaths were reported under this head against 3,217 in 1919. For the Western, Central, Southern, Guzerat and Sind Registration Districts, the total deaths were 1,428, 585, 805, 229 and 694, respectively, as compared with 1,190, 179, 648, 174 and 1,026 in 1919. In Bombay City 422 deaths were reported. Taking the Presidency as a whole one woman was reported as having died as the result of child-bearing to every 142 live births as compared with 164 in 1919.

For the different Registration Districts the proportion of live births to each fatal case of child-bearing was :—Western Registration District 96, Central 265, Southern 143, Guzerat 443 and Sind Registration District 95. In Bombay City one woman died to every 46 births.

The maternal mortality rate for urban areas was one to 70 births while for rural areas it was one to 174 births.

92. The number of deaths from the chief diseases for each Collectorate, by months, are shewn in Annual Forms Nos. VII to XII.

SECTIONS VII AND VIII—No remarks.

SECTION IX.

SANITARY WORKS—CIVIL.

MUNICIPALITIES.

93. The conversion of Chalisgaon Notified Area into a Municipal District brought the number of Municipalities in the mofussil to 157 with a total population of 23,81,064 and an aggregate income of Rs. 1,49,35,786.

Rs. 84,95,827, or just under 57 per cent. of the income, was raised by taxation, giving an incidence per head of population of Rs. 3-9-0; an increase of 5 annas per head on taxation in 1919. Taxation varied between Rs. 7 per head in Karachi City and annas $2\frac{5}{12}$ in the small Municipality of Sindhkheda in West Khandesh. The figures include the special conservancy cess levied in many municipalities.

The expenditure on public health measures in Karachi City was Rs. 10 per head of population and averaged slightly over Rs. 2 in the remaining mofussil Municipalities. In Bombay City the figure was at the rate of Rs. 9-13-0 approximately.

The following table shows the death-rates amongst Municipal populations in each district. Out of 157 Municipalities, 23 suffered from plague, 9 from small-pox and 5 from cholera. Forty-five recorded influenza :—

Statement showing, by districts, combined Birth and Death rates for Municipalities in the Bombay Presidency during the year 1920.

Districts.	Number of municipalities.	Ratio of Births per 1,000 of population.	Ratio of Deaths per 1,000 of population.					Remarks.
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.	
Ahmedabad	10	38·45	..	·10	·00	·44	46·39	
Kaira	9	38·14	..	·56	·00	3·50	43·31	
Panch Mahals ..	2	28·98	..	·00	·00	1·08	25·00	
Broach	3	37·97	..	·00	·00	2·31	31·15	
Surat	3	27·22	..	·06	·00	1·87	31·78	
Thana	7	21·32	0·9	·10	1·06	1·08	33·44	
Ahmednagar	4	20·50	..	..	..	·87	25·80	
East Khandesh ..	12	31·65	·02	..	6·19	·39	29·37	
West Khandesh ..	7	30·11	..	..	2·24	·57	22·27	
Nasik	6	29·47	·17	·08	·01	·91	34·50	
Poona	12	21·17	·21	·55	·17	1·95	40·36	
Satara	12	23·35	·44	·09	1·73	25·63	23·90	
Sholapur	5	30·54	·01	·08	·02	·14	35·77	
Belgaum	6	30·89	·43	·10	1·58	1·49	16·11	
Bijapur	4	34·26	..	·18	..	2·94	29·51	
Dharwar	10	34·79	·01	·04	2·70	2·19	31·48	
Kanara	8	26·86	..	1·86	..	·07	25·41	
Kolaba	7	21·68	..	·03	1·54	·70	30·13	
Ratnagiri	4	27·22	·25	·10	..	1·66	25·69	
Karachi	5	45·90	..	·59	1·90	2·97	37·04	
Hyderabad	6	29·04	..	2·25	·05	·14	26·34	
Sukkur	5	30·02	..	·29	·04	·03	27·63	
Larkana	5	29·14	..	·08	..	·28	28·80	
Nawabshah ..	2	26·45	..	·63	·07	..	22·44	
Thar and Parkar ..	2	11·48	..	·91	..	·02	21·25	
Upper Sind Frontier ..	1	18·87	..	..	..	..	16·05	

In three Revenue districts, as compared with 5 in 1919, the municipal death-rate exceeded 40 per 1,000 of population and in 8 others as compared with 10 in 1919 it exceeded 30. Those shewing high figures suffered from plague and influenza.

The Deputy Sanitary Commissioners gave advice in sanitary matters in the case of 15 Municipalities in the Southern Registration District, 7 in the Central, 6 in the Western, 5 in Sind, and 3 in Guzerat. Action was taken by many, both in regard to routine matters (conservancy, water-supply and prevention of spread of epidemics) and in measures of a more general nature. The following is a brief summary:—

Matheran.—Nearly half the latrines in the catchment area of the Charlotte Lake were re-constructed after a pattern designed to collect all liquid instead of allowing it to run to earth or soak into the ground and pollute the Lake supply.

Dhulia.—A Health Officer was appointed ; also a qualified Sanitary Inspector for conducting a rat-campaign ; an ambulance was provided; new gutters were constructed. *Nasik.*—Construction of Panchwati drain, filling up hollows on the bank of the river and proper arrangements for the Sinhast Fair. *Trimbak.*—Piped Water-supply was introduced, pilgrim sheds were erected and 4 public latrines and 3 urinals were built. *Shahada.*—Latrines for women constructed. Erandol, Jalgaon, Malegaon, Dhanduka, Ahmednagar and Jacobabad Municipalities made improvements of their water supplies. *Poona.*—The opening up of congested areas was commenced by acquisition of properties for the East-West Road Scheme ; a cremator at a cost of Rs. 2,500 was installed. *Lonavla.*—Filling up borrow pits on the Bhangarwadi road. *Talegaon-Dabhade.*—Destruction of prickly pear; acquisition of a site as night-soil depôt. Ratnagiri Municipality commenced the extension of the Gawaliwada drain. *Ahmedabad.*—The number of midwives was increased from 3 to 6 and a resolution to appoint a Deputy Health Officer and a Chief Inspector was passed. A new pumping engine was set up at the drainage pumping station at Jamalpur and chlorination tanks were constructed. Several kilns were either closed or removed. A sum of Rs. 15,000 was spent on levelling the rain water courses. *Nadiad.*—New sources of water supply were added in the case of some of the tanks. Licenses for offensive trades were issued and the fees recovered amounted to Rs. 478-8-0. The Health Officer was specially deputed to Bombay to study tanneries. The Municipal nurse imparted instructions to mothers in the poorer localities regarding infant feeding and nursing. Lectures were delivered to the public on infantile mortality by showing charts. *Dakor.*—Arrangements were made to treat drinking water-supplies with Potassium Permanganate. Fines amounting to Rs. 378 were realised from cases of conviction for selling adulterated milk. *Umarkot.*—Measures were taken to discontinue rice cultivation in the restricted area. *Sukkur.*—Sullage farm has been properly laid out. *Garhi-Yasin.*—Provision of public latrines. *Ratodero.*—Bazar and streets paved.

The Nasik system of trenching night-soil has now been introduced in 12 towns in the Guzerat Registration District and is working satisfactorily. The Nadiad Municipality expended Rs. 718 in connection with trenching excreta and realised Rs. 2,589 by the sale of the poudrette. This system has lately been introduced also at Malegaon, Dhulia, Dharangaon, Bhusawal, Jalgaon and Sukkur.

A large number of Municipalities are below the standard of conservancy establishment and sanitary implements owing to prohibitive prices in some cases and inability to obtain them in others. An attempt has, however, been made in the following towns to work up to the standard :—Ahemedabad, Broach, Dakor, Dholka, Umreth, Dholera, Dhulia, Shirpur, Nandurbar, Bhusawal and Sukkur.

Municipal Health Staff.—During the year under report, Health Officers with full qualifications were employed in Karachi, Ahmedabad, Surat and Poona ; Health Officers possessing M. B., B. S. degree of the Bombay University with Sanitary Surveyors' qualifications were employed at Dhulia and Bandra. Both Broach and Hyderabad (Sind) have employed as their Health Officers medical men not in possession of Public Health qualification. Nasik, Nadiad and Dakore employed Health Officers of the standing hitherto described as Third Class, *i.e.*, holding a medical and surgical diploma obtained in India *plus* the Sanitary Surveyors' certificate of the Royal Institute of Public Health obtained in Bombay and it is to be hoped that many more towns of corresponding size will follow their example. The number of Sub-Assistant Surgeons appearing for the Bombay Course is on the increase.

Fifty qualified Sanitary Inspectors were employed in 26 towns as follows :—Ahmedabad (10), Poona (6), Sholapur (4), Surat (4), Sukkur, Dhulia, Broach and Karachi—two each and the following Viramgaon, Dholka, Umereth, Larkana, Nasik, Bhusawal, Kurla, Bandra, Ahmednagar, Satara, Pandharpur, Hubli, Godhra, Belgaum, Dharwar, Gadag, Bijapur, and Bagalkot—one each. In 1919 there were 51 men of this class in 29 towns. Their difficulties in efficiently discharging their duties, in securing genuine co-operation and in insecurity of tenure of appointment, remain as stated in previous reports.

The Municipalities of Kaira, Ranpur and Rander rely for advice on sanitary matters on the medical officers amongst their Councillors while the Municipalities of Mahudha, Sanand, Dhandhuka and Modasa pay the Dispensary Medical Officers Rs. 5 to Rs. 10 per mensem for such advice.

Local Sanitation by Dispensary Medical Officers.—In the Central Registration District, advice was given by the Sub-Assistant Surgeons to the Municipalities of Sirur, Junnar, Alandi, Talegaon-Dabhade, Wai, Karad, Mhaswad, Barsi, Vengurla and Chiplun, and, except in three, necessary action was taken.

Dispensary Medical Officers are now enjoined to apply to officers of the Sanitary Department for special advice regarding sanitary defects in their neighbourhood. Only one such communication was received during the few months following the issue of the Government Order on the subject (No. 8353 of 5th August 1920, General Department).

The Deputy Sanitary Commissioner, Southern Registration District, visited nine dispensaries and conferred with the Medical Officers as regards sanitary matters in respect of the towns. The Sub-Assistant Surgeons plead that their medical duties leave them no time for sanitary work.

Sanitary Board.

94. During the year the Sanitary Board sanctioned 10 water-supply schemes and 6 drainage schemes. Boring operations were made in 8 towns while 81 schemes for major and minor sanitary works were under investigation by the Sanitary Engineer to Government, Bombay. For details a reference is invited to that officer's report in his capacity as Secretary to the Sanitary Board, published as an appendix hereto.

95. *Town Improvement Schemes—Hyderabad (Sind).*—The work of filling up insanitary hollows in Eastern Kacha which was started in 1919 with the assistance of a Government grant amounting to Rs. 37,015 made considerable progress. Section B of the Damanwah hollows and the culvert across the hollows are completed while the work of filling section A of the hollows and tank No. 2 is expected to be completed soon. *Dhond* Notified Area Committee improved roads.

96. *District and Taluka Local Boards.*—The combined income of the 26 District Local Boards and 216 Taluka Local Boards was Rs. 1,06,12,595. A Taluka Local Board was newly introduced in Umbergaon. The incidence of income and taxation per head of population was 11·8 annas and 3·7 against annas 8·6 and 3·0 in 1919. A sum of Rs. 23,14,021 was spent on communications by these bodies while Rs. 3,21,347 were spent on public health work.

Under Government Orders, General Department, No. 9602 of 13th September 1920, the following grants were placed at the disposal of the Commissioners of Divisions for distribution among the District Local Boards of the Presidency and Sind. The allotments from the Imperial grant of Rs. 7 lakhs were incorporated by the Boards in the general revenues and utilized to improve communications, water-supplies and objects other than educational; the supplementary Provincial grant of Rs. 8,24,000 was specially utilized for road repairs :—

Divisions.	Imperial.	Additional grant from Provincial Funds.
	For Communications.	For Road Repairs.
	Rs.	Rs.
Northern Division	1,82,000	2,14,000
Central Division	2,08,000	2,48,000
Southern Division	1,56,000	1,69,000
Sind Division	1,54,000*	1,93,000

* Rs. 10,000 balance in reserve with the Commissioner in Sind

Besides the above there is an annual grant of Rs. 25,000 for the improvement of communications in Sind and it is distributed as follows :—

	Rs.
Karachi	3,000
Hyderabad	3,500
Sukkur	4,000
Thar and Parkar	3,500
Larkana	5,000
Nawabshah	3,000
Upper Sind Frontier	3,000
Total ..	25,000

Government also sanctioned a grant-in-aid of Rs. 1,20,000 for improvement of Village Water-supply in their General Department Order No. 6465 of 14th June 1920, which was distributed as follows :—

	Rs.
Northern Division	35,000
Central Division	32,500
Southern Division	20,000
Sind Division	32,500

These grants were supplemented by allotments from Local Funds and popular contributions and were expended in constructing wells, tanks, troughs and cisterns, in repairing old wells, deepening existing tanks, in boring and jumper operations and in closing step-wells.

Seventy-eight step-wells were converted into draw-wells, out of which 34 were in the Poona District and 26 in the Ratnagiri District. The number of draw-wells newly constructed was 422, out of which 142 were in 46 villages of the Kanara Collectorate. The beneficial result of closing the step-wells has been noticeable in the reduction in incidence of guinea-worm.

97. During the year shortage of water was felt in many villages and scarcity and famine conditions existed in Ahmednagar, Nasik, Satara, Poona, Sholapur, Belgaum and Bijapur Districts. Two Famine Camps and two Poor Houses were opened in the Ahmednagar District.

Sterilization of Water-supplies.

98. A scheme directed against the spread of cholera (Government Order, General Department, No. 7229 of 7th July 1920) was started during the year. The following is a summary of a report submitted to Government on its working :—

Eight qualified Sanitary Inspectors were selected, put through a course at the Public Health Laboratory, Poona, provided with a standard outfit for purifying village water-supplies and distributed—two to each Registration District. The Deputy Sanitary Commissioners in consultation with district officers arranged their itineraries and directed their work. Their mandate was to give practical demonstrations to minor district officers of all departments, patils, village officials and all and sundry on the permanganating of wells and to the more literate from amongst their classes on the taking of water samples for analysis, and on the use of bleaching powder and similar water purifiers.

Regular work commenced in October and the scheme has succeeded beyond expectation. The Educational Department took full advantage of the classes, school masters and senior pupils attending in numbers. Mamlatdars gave every assistance to the Instructors while working in their talukas and gave their own subordinates opportunities of attending the classes when their own duties permitted. The attendance from other branches of Government service depended on the interest taken by the individual local officers ;

many were under the misconception that the instructions would be technical for their men to follow. It is especially desirable that the Public Works Department will avail of further tours of the Instructors in order that they may become familiar with the simple but highly important precautions to be taken in collecting samples for analysis—a duty so frequently required of them.

Patils, village officials and others formed a good proportion of the classes and given as they were in simple language in the local vernacular the instructions were found to be followed with keenness and intelligence as was frequently tested by the Deputy Sanitary Commissioners when present. In fact, it has become the rule for the Instructors to go beyond mere demonstrations in permanganating and impart further information on matters bearing on the spread of cholera and on the general rudiments of hygiene, *e. g.*, the part played by flies, food and water in the spread of cholera and the means to evade them, the essentials of a good well and the safe-guarding of water-supply against pollution, etc.

Special use was made of the Instructors in the few cases where cholera broke out in a district by detaching them from their routine tours to deal with the wells in and around infected places. The instructions given under these circumstances were especially appreciated.

The simple scheme has more than justified itself and deserves to be continued.

99. *Acquisition of lands for extension of village sites.*—Progress made in the extension of village sites for the relief of overcrowding may be summarised as follows:—

17 Gunthas of land were acquired for the extension of Maharwada in the village site at Karodi, Mahal Pathardi, in the Ahmednagar District.

In the Nasik District land was acquired in Mungse village of Baglan Taluka for the extension of village site to relieve overcrowding.

In West Khandesh the people of the village Mhasdi, Pargana Ner, Taluka Sakri, applied for land required for the extension of the village site. It is reported that the land acquired has been parcelled out into 202 plots.

In Kolaba land measuring 4 acres and 37 gunthas out of the protected forests was transferred for this purpose.

Dharwar District.—In Kod Taluka 5 acres and 33 gunthas have been notified for acquisition for the extension of Hedigond an overcrowded village. *Karajgi Taluka*—Two acres 25 gunthas of land were acquired for the extension of the village of Ijarelakamapur. *Hangal Taluka.*—The villagers of Hallibail moved *en bloc* to a more sanitary site outside the old village. *Bankapur Taluka*—11 acres 20 gunthas were acquired for the extension of sanitary improvement of Shiggaon village site and in *Mundargi Mahal* 11 acres were acquired for the same purpose.

Action towards acquisition of land was also taken in regard to the villages of Hongal in the Parasgad Taluka and Govankop in the Murgod Mahal of the Belgaum District.

Bijapur District.—Thirty-four villages were found in need of additional and new gaothans. In 6 of these acquisition has been completed and the plots handed over, in 5 cases Government land is added to gaothans and in the rest proceedings are going on.

100. *Notified Areas.*—There are 36 Notified Area Committees. Bhayandar in Thana District was declared to be a Notified Area Committee.

The population served by the Notified Area Committees during the year was 1,41,460 and the total income excluding opening balance came to Rs. 2,71,062 giving an incidence of income per head of Rs. 1-14-8.

The following tables give the details of income and expenditure and the combined birth and death rates for Notified Areas in each District :—

Statement showing income and expenditure of the Notified Area Committees during the year 1920-1921.

Districts.	Serial No.	Names of towns and villages.	Population.	Income including opening balance.	Expenditure.	Closing balance.	Remarks.
				Rs.	Rs.	Rs.	
Broach	1	Palej	4,255	5,438	2,645	2,793	
Thana	1	Andheri	3,749	76,051	52,691	23,360	There are 11 Notified Area Committees in Ahmedabad District and 7 in Thana District which supervise building operations only and they have collected no funds.
	2	Borivli	4,577	15,226	14,478	748	
	3	Malad	3,887	32,781	25,652	71,29	
	4	Santa-Cruz	1,072	58,046	47,716	10,330	
	5	Vile-Padle	4,820	32,234	19,182	13,052	
East Khandesh ..	1	Pachora	5,461	16,876	9,757	7,119	
	2	Jamner	7,260	8,560	6,358	2,202	
West Khandesh ..	1	Dondaicha Warwada ..	3,490	4,194	2,329	1,865	
Nasik	1	Manmad	7,257	25,576	13,799	11,777	
	2	Nandgaon	6,971	16,977	13,165	3,812	
Poona	1	Dhond	3,112	7,553	7,367	186	
Sholapur ..	1	Madha	5,306	3,616	2,311	1,305	
	2	Kurduwadi	5,760	10,082	3,847	6,235	
	3	Malsiras	2,400	1,588	1,127	461	
Belgaum ..	1	Chikodi	6,897	6,157	3,867	2,290	
	2	Khanapur	4,280	2,115	1,588	527	
Dharwar ..	1	Hirekerur	3,240	2,200	1,163	1,037	
	2	Hangal	4,872	987	839	148	
Ratnagiri ..	1	Rajapur	6,349	25,298	24,550	748	
	2	Khed	3,842	3,305	2,339	966	
	3	Dapoli	3,023	5,562	3,590	1,972	
Kolaba	1	Karjat	2,290	9,981	6,322	3,659	
Bijapur	1	Indi	5,058	1,742	1,660	82	
	2	Muddebihal	4,055	3,008	2,478	530	
	3	Hungund	6,441	2,022	1,682	340	
Sukkur	1	Kote Sultan	1,696	1,998	1,018	980	
	2	Mirpur Mathelo ..	1,642	1,369	974	395	
	3	Ubauro	1,716	1,891	1,885	6	
	4	Khairpur Daharki ..	1,657	824	810	14	
Larkana	1	Mehar	2,045	15,312	8,636	6,676	
	2	Khairpur Nathan Shah ..	1,484	2,198	2,077	121	
	3	Dadu	2,449	2,073	1,744	329	
Hyderabad ..	1	Tando Jam	2,634	5,099	2,027	3,072	
Nawabshah ..	1	Nausbahro	3,400	2,401	2,243	157	
	2	Khandiaro	3,013	1,613	1,406	207	
	36	Total ..	141,460	411,952	295,322	116,630	

Statement showing, by Districts, Combined Birth and Death rates for Notified Areas in the Bombay Presidency during the year 1920.

Districts.	Number of Notified Areas.	Ratio of Births per 1,000 of population.	Ratio of Deaths per 1,000 of population.					Remarks.
			Cholera.	Small-pox.	Plague.	Influenza	From all causes.	
Broach	1	18·57	..	..	..	..	20·68	
Thana	5	15·91	1·07	..	..	..	23·58	
East Khandesh ..	2	34·44	..	..	·34	·17	28·97	
West Khandesh ..	1	35·00	..	..	..	..	16·33	
Nasik	2	14·16	1·44	·07	3·02	..	18·55	
Poona	1	25·68	..	..	..	·57	20·12	
Sholapur	3	18·95	·27	·13	..	..	14·44	
Belgaum	2	39·81	..	..	2·95	1·70	32·11	
Bijapur	3	33·99	..	..	..	2·36	25·00	
Dharwar	2	34·02	..	..	·01	..	25·27	
Ratnagiri	3	25·73	..	·28	..	·21	24·60	
Kolaba	1	36·96	..	..	..	..	30·12	
Sukkur	4	21·76	..	·26	..	..	22·16	
Larkana	3	30·29	..	1·55	..	..	28·39	
Hyderabad ..	1	25·24	..	·38	..	..	26·36	
Nawabshah ..	2	16·17	..	1·22	..	..	20·13	

The following Notified Area Committees did useful work :—

Manmad removed prickly pear and made provision for slab-drains, latrines for women and mutton market.

Mehar removed pottery from the heart of the town.

Advice on public health matters was given by the Deputy Sanitary Commissioners to the Notified Area Committees at Palej, Mehar, Khairpur Nathanshah, Hundgund, Dondaicha Warwada and Rajapur.

The conversion of the Palej Notified Area (Broach) into a Village Panchayet is under consideration.

101. *Village Sanitary Boards.*—The following statement shows the income and expenditure of the Village Sanitary Boards during the year under report :—

Statement showing, by Districts, the Income and Expenditure of the Village Sanitary Boards in the Bombay Presidency during the year 1920-1921.

Districts.	Number of village Sanitary Boards.	Names of Villages.	Popular contribution.	Total income including opening balance.	Total expenditure.	Closing balance.	Remarks.
			Rs.	Rs.	Rs.	Rs.	
Kanara ..	1	Kondli, Balikop, Hosur } Siddapur ..	131	289	263	26	
Thana ..	1	Gholwad-Bordi ..	566	1,744	887	857	
Surat ..	1	Chikhli-Samroli ..	2,080	1,927	1,028	899	
Poona ..	1	Aundh and Bopodi ..	1,057	1,057	463	594	

102. *Sanitary Committees.*—During the year Sanitary Committees were newly formed as under :—

Northern Division.—Pahaj and Kantharia in Broach District, Traj in Kaira; Haria and Itellapore in Surat.

Central Division.—Vadgaon Nimbalkar, Otur, Pandhare, Valhe and Dehu in Poona District.

Southern Division.—Hirehomihalli, Galgi-Hulkop, Kod, Aladakatti, Sudi and Alur in Dharwar District; Ambapur, Kashele, Kolad and Gadale in Kolaba District.

Sind Division.—Retri in Karachi District; Bolishah and Buthi in Larkana District; Jamsaheb in Nawabshah and Bulawalmari, Jando Mari, Khokar, Seri, Tando-Bahawal, Tando-Ghulam-Mahomed, Khebar, Sekhat, Wasan, Syedabad, Bago-Rind and Mehar in Hyderabad District.

The Bakshapur Sanitary Committee in the Upper Sind Frontier and Vadgaon Nimbalkar and Otur (Poona District) are not yet in working order. The Committees at Naushahro and Kandiaro (Nawabshah District) and Dadu (Larkana) were converted into Notified Area Committees. The Sanitary Committees at Chinawal (East Khandesh) and Bhagur (Nasik) were abolished.

The members of the Sanitary Committee at Ghoda resigned for political reasons and the further existence of the Committee is under consideration.

Detailed information regarding income and expenditure and the birth and death rates for the population under the administration of Sanitary Committees are given by Districts in the following two tables :—

Statement showing, by Districts, the Income and Expenditure of the Sanitary Committees in the Bombay Presidency during the year 1920-1921.

Districts.	Number of Sanitary Committees.	Total income including opening balance.	Popular contributions.	Total expenditure.	Closing balance.	Remarks.
		Rs.	Rs.	Rs.	Rs.	
Ahmedabad	8	12,635	3,033	6,891	5,744	
Kaira	29	36,162	8,720	17,705	18,457	
Panch Mahals	5	11,431	2,380	7,255	4,176	
Broach	27	34,891	7,828	17,592	17,299	
Surat	21	23,627	7,618	18,309	5,318	
Thana	11	21,514	4,980	11,917	9,597	
Total, Northern Division ..	101	1,40,260	24,559	79,669	60,591	
Ahmednagar	20	24,748	5,846	14,436	10,312	
East Khandesh	14	45,912	9,389	33,592	12,320	
West Khandesh	8	16,537	2,450	7,717	8,820	
Nasik	24	30,032	3,611	14,218	15,814	
Poona	16	8,463	1,403	4,383	4,080	
Satara	20	11,825	3,446	9,035	2,790	
Sholapur	4	4,045	1,690	3,168	877	
Total, Central Division ..	106	1,41,562	27,835	86,549	55,013	
Belgaum	32	43,923	7,930	23,315	20,608	There are no Sanitary Committees in Kanara District.
Bijapur	13	20,931	4,776	10,978	9,953	
Dharwar	48	41,345	9,944	22,208	19,137	
Kolaba	29	12,921	2,788	4,319	8,602	
Ratnagiri	3	596	221	358	238	
Total, Southern Division ..	125	1,19,716	25,659	61,178	58,538	
Karachi	37	..	..	..	..	
Hyderabad	38	32,924	6,776	14,243	18,681	
Sukkur	16	11,680	3,229	8,673	3,007	
Larkana	50	34,940	6,799	22,368	12,572	
Nawabshah	26	34,527	6,746	18,370	16,157	
Thar and Parkar	26	32,772	6,368	17,493	15,279	
Upper Sind Frontier ..	11	14,389	4,039	9,734	4,655	
Total for Sind ..	204	1,93,611	41,207	1,03,887	89,724	
Grand Total ..	536	5,95,149	1,19,260	3,31,283	2,63,866	

Statement showing, by Districts, combined Birth and Death rates for Sanitary Committees in the Bombay Presidency during the year 1920.

Districts.	Number of Sanitary Committees.	Ratio of Births per 1,000 of Population.	Ratio of Deaths per 1,000 of Population.					Remarks.
			Cholera.	Small-pox.	Plague.	Influenza.	From all Causes.	
Ahmedabad ..	8	27·99	..	·24	..	1·67	29·86	
Kaira	29	30·20	..	..	..	2·76	32·16	
Panch Mahals ..	5	43·03	..	..	..	2·78	30·89	
Broach	27	39·77	..	..	..	..	28·49	
Surat	21	22·57	..	·17	..	1·69	14·39	
Thana	11	26·52	..	·03	·49	1·40	24·53	
Ahmednagar ..	20	27·20	..	..	..	·52	18·72	
East Khandesh ..	14	40·98	..	·02	7·40	·17	32·79	
West Khandesh ..	8	41·14	..	..	·84	·42	23·04	
Nasik	24	37·63	..	..	..	·32	26·89	
Poona	16	27·49	·35	·07	·02	·57	22·13	
Satara	20	23·31	1·36	..	2·30	21·23	18·93	
Sholapur ..	4	27·36	·52	..	..	..	2·55	
Belgaum ..	32	32·98	·01	·09	1·43	1·34	24·82	
Bijapur	13	33·74	·24	·03	·03	·44	24·08	
Dharwar ..	48	28·28	..	·16	3·80	1·00	28·55	
Kolaba	29	30·86	·04	·04	1·56	·40	35·58	
Ratnagiri ..	3	15·87	..	..	..	..	19·29	
Karachi	37	21·52	..	2·25	..	..	26·05	
Hyderabad ..	38	24·25	..	·37	..	..	27·02	
Sukkur	16	29·23	..	·22	..	..	23·87	
Larkana	50	25·42	..	1·15	..	..	23·02	
Nawabshah ..	26	23·82	..	1·63	..	..	25·43	
Thar and Parkar ..	26	17·13	..	1·04	..	..	20·75	
Upper Sind Frontier ..	11	29·63	..	1·40	..	..	28·04	

The Deputy Sanitary Commissioners visited 42 Sanitary Committees' areas. Samples of useful work done by some of these Bodies are as follows :—A Dharmashala was constructed at Warangaon, latrines at Songir, Pathardi and Akola and gutters at Adavad. At Arai a pit was filled in. A well is under construction at Arnala. The Deola, Mamdapur, Karjat, Borgaon Committees removed prickly pear. Improvements in conservancy were effected at Ghouspur, Jimpir, Bhian, Manjhu and Pano-Akil. A burial ground was closed at Kadarpur. Amod and Hansot in Broach District and Malegaon in Nasik District, Talegaon-Dhamdhere in Poona District worked well.

Many Sanitary Committees are prone to accumulate balances without spending them on works of public utility. There are also instances where expenditure has been applied to works of secondary sanitary urgency.

The Deputy Sanitary Commissioner, Sind Registration District, reports that in Sehwan Division owing to the poor financial condition of the Committees the sanitation of most villages is not satisfactory.

Sanitary Associations.

103. There were nine Sanitary Associations working in the Presidency. All of them continue to do useful work as the following examples shew :—

The Karachi Association have increased their staff to two lady visitors and 5 Indian mid-wives. A Maternity and Child Welfare exhibition was opened by the Commissioner in Sind in April 1920. The Deputy Sanitary Commissioner was one of the members of the organising committee. Cinema and Lantern demonstrations were given. As a result of the exhibition, a nursery was constructed in the Lyari quarter.

In Hyderabad though there is no Health Association excellent work on Child Welfare was carried on by Miss Piggot, a public spirited Missionary Lady. She has taken up the training of local daies and delivered lectures in schools. Her work is very favourably commented on in the Deputy Sanitary Commissioner's report and it has earned the appreciation and support of the Municipal Corporation.

The Broach Sanitary Association arranged Health Shows during the District Agricultural and Cattle exhibition at Broach, also one in Rajpipla State and a third at Sakultirth at the time of the fair. The Association continued to maintain three shops for the sale at the lowest price of pure milk in the City. A class in home-nursing was conducted. A Committee was appointed to inspect different localities with regard to breeding places of flies. Three weighing machines for babies are placed at three vaccinating centres in the city.

A number of lantern and other lectures were delivered and 15 shows with charts and models were held by the Ahmedabad Association. They also opened 4 shops for the sale of pure milk.

The Surat Sanitary Association shewed activity in different directions such as care of the new-born more especially with regard to Opthalmia Neonatorum (Henderson's Opthalmic Scheme), inspection of school children; giving of lectures.

Nadiad, Viramgaon, Dharwar and others did also very useful work of educating the public in general public health matters.

Fairs and Festivals.

104. *Pandharpur.*—The chief day of the Ashadhi Fair was on 27th June 1920. The total number of pilgrims that attended the Ashadhi was 1,24,775 out of which 1,14,055 paid the pilgrim tax. Twenty-four Sub-Assistant Surgeons and 5 Sanitary Inspectors were employed and all the palkhis were inspected *en route* and shewed clean bills of health. Water-supply in Pandharpur was good and adequate. One hundred and fifty "Pandharpur Pattern" platform latrines were in use. There was no cholera. Dr. da Gama, Deputy Sanitary Commissioner, Central Registration District, attended the fair as usual, and he exercised supervision and made many valuable suggestions. The question of improvement and protection of water-supplies on the Alandi-Pandharpur Palkhi route is under consideration.

The Sinhast Festival at Nasik and Trimbak, an event that comes round every 12 years, commenced on 14th July 1920 and will continue till 14th August 1921. On the last occasion when this festival took place it was attended by a severe visitation of cholera. Since that date the arrangements at pilgrimages have engaged the close attention of Government and most District Officers as well as the Officers of the Sanitary Department are familiar with the measures that can be taken for the well-being of pilgrims and the safe-guarding of Public Health. The Sanitary arrangements for the Annual Fairs at Pandharpur under the conduct of Dr. da Gama, the Deputy Sanitary Commissioner, Central Registration District, have developed practically to matters of routine and the experience acquired was applied in the preparations for the Sinhast. From the very commencement of the "Jatra" therefore, a scheme was in operation that had been carefully prepared at meetings under the presidency of the Collector, of the Deputy Sanitary Commissioner and the Sanitary Engineer of the District and the other local authorities concerned. The arrangements were further elaborated as circumstances required by Dr. Munsiff who as Deputy Sanitary Commissioner had the task of supervising and co-ordinating the measures taken by the different Bodies concerned. The pilgrims were spread over a length of 25 miles.

(1) Commencing at the Nasik Road Railway Station where arrangements were made as regards accommodation, detection, and treatment in hospital of cases of infectious disease and treatment of illness of all kinds.

(2) Along the road to Nasik City wells were re-modelled, where necessary, policed and supervised by a Sanitary Inspector specially appointed and conversant with the processes for well water purification.

(3) At a point near the entrance to the town the pilgrims came under the control of the Nasik Municipality the halt for the purpose of paying the pilgrim tax and entering their names in the books of their appropriate priests gave a convenient opportunity for observation by the Municipal Medical Officer on duty.

(4) In Nasik and its immediate surroundings extensive arrangements had been made in matters of construction mostly at Government expense and by the Municipality in regard to staff, sanitary arrangements, control of booths and food-stuff, protection and purification of water-supply, flushing of the sacred pools in the river Godavery and in various other directions. A drainage scheme at a cost of Rs. 48,311 for Panchwatti was one of the schemes carried out by Government.

The Municipality in all these matters rose to their responsibilities and it may be stated here so did all concerned, *e. g.*, the District Local Board, Trimbak Municipality and the priests in charge of the sacred shrines.

(5) On the 18 miles of road between Nasik and Trimbak extensive preparations were also called for. All wells along the route many of them fouled and out of use and repairs were carefully surveyed. Such as were required and were suitable were re-constructed, cleared of rubbish and algoid growth, converted from step to ordinary tubular wells and so on. Regular Chowkidars were placed in charge. Unsuitable wells were put out of action and regular permanganating of the wells on their registers was carried out by appointed Sanitary Inspectors throughout the pilgrimage. Scavenging and general sanitation was attended to along the roadside as well as at the main halting places—Pimpalgaon and Mahiravani—where pilgrims on foot or travelling by slow conveyance halted for a night. General medical supervision was also arranged for. These measures along the route are in my opinion of as great importance in prevention of epidemics as are measures in the actual places of pilgrimage.

(6) At Trimbak where the pilgrimage is completed reorganisation and construction on a large scale were called for. The provision of a water-supply scheme was the most important as well as the most extensive constructional work undertaken in connexion with the "Jatra". Government generously provided the necessary funds Rs. 1,02,300 and the work was designed and carried out by the Sanitary Engineer to Government and his Local Executive Officer. The Gangasagar and Visoba Tanks were enclosed, pumps and supply reservoir on up-to-date lines were provided. A chlorinating apparatus was included in the works and a sufficient and pure supply of water on the basis of five gallons per head was delivered by pipe at stand-pipes in different parts of the town.

The other Tanks in Trimbak were also put in order and the water was used for other domestic purposes. Medical, sanitary supervising and other staffs on lines similar to Nasik were installed to meet requirements at Trimbak. Special attention in all matters was given on the days when a rush of pilgrims was expected. The total number did not amount to expectations. Upto the end of the year some 186,695 tax-paying pilgrims besides some 50,508 Sadhus, other mendicants and people from surrounding villages (all exempt from the tax) visited Nasik. At Trimbak 117,565 paid the tax and there were about 15,000 exempted pilgrims. All these arrangements had effect in keeping this year free from the serious outbreaks of disease that are said to have marked the festival previously. A mild outbreak of cholera did occur in August 1920.

The Deputy Sanitary Commissioner (who promises a more detailed report on the sanitary management of the Sinhast at the end of the "Jatra") states "the scanty rainfall last year entails grave danger of cholera this hot weather and the large influx of pilgrims which is expected at the different 'Parvanis' between March and August 1921 will add greatly to that danger. Both the Sanitary and the local authorities are prepared to meet it."

Other Fairs.—Fairs at Vautha in Dholka Taluka of Ahmedabad District and Sakaltirth in Broach Taluka took place in the last week of November 1920. About 100,000 and 35,000 pilgrims, respectively, congregated at these places. The services of the Inspectors of Sanitation and Vaccination, Ahmedabad and Broach Districts were placed at the disposal of the District Officers for the Fairs concerned.

In the Southern Registration District five villages were attacked by cholera of a mild type as a result of importation of infection from pilgrim centres, *viz.*, Turkewadi and Supe in Chandgad Petha and Chandur in the Chikodi Taluka from Pandharpur and Baluti and Dhavaleshwar in Bilgi Petha from the fair at Sonna in the same Petha.

Sanitary arrangements were also made in connection with the Lal Shahbaz fair at Sehwan and the Deputy Sanitary Commissioner, Sind Registration District, reports that there was nothing of special public health interest to report.

Public Health Laboratories.

105. There are two Public Health Laboratories in the Presidency; one established in Poona and the other in Karachi. The establishment of a similar Public Health Laboratory at Ahmedabad is under consideration.

At the *Poona Laboratory* routine bacteriological and chemical work in connexion with the local water-supply installation was carried on systematically as detailed in previous reports.

A total of 2,231 samples were examined bacteriologically and 1,798 chemically at the Laboratory.

The standard of purity of the water entering the supply reservoir at the Cantonment Water Works absence of bacteria in 100 cub. centimetres of water was maintained on practically all days of the year. By the time the water has passed through the distribution reservoirs and service pipes to the consumer—analysis shews that there is some falling off from this high standard.

The manurial value of the sewage tank effluent at Hadapsar was estimated weekly.

The Analyst (Dr. Mama) gave courses on water purification to the Instructors whose work is referred to in paragraph 98 of this report and to other members of the Sanitary Department. He also paid special visits to districts as required, examining 125 samples in the course of such tours: Ahmedabad, Nasik and Trimbak (new installation) were included in these tours; the local officials and men in charge of water-supplies at these places were given advice and instructions.

The Karachi Public Health Laboratory which came into existence at the end of April 1920 is still housed temporarily in 2 huts and is in charge of Dr. F. Barretto, D.P.H. In June routine examination of the Karachi water-supply was started and since September samples are daily examined both chemically and bacteriologically and the correct dose of chlorinating agent ascertained. Untreated Karachi water shews presence of bacteria in 1 cubic centimetre of sample as a rule. The

Analyst (Dr. Barretto) reports that prior to September bacteriological examination of samples after chlorination shewed varying results but after that date examination indicated uniform purity. The standard of purity taken was—absence of bacteria in 100 cub. centimetres of sample. Samples of water issued to the public are also sent by the Municipality, bi-weekly, for bacteriological and bi-monthly for chemical examination. The present arrangement at the water-works for chlorinating is not satisfactory; the installation of a scientific apparatus for the automatic addition of the prescribed dose of re-agent necessary for sterilization is desirable.

Dr. Barretto also carried out bacteriological examination of Hyderabad water-supply at site for a period of a week and made suggestions for the improvement of the supply and arrangements for the periodical analysis of samples thereof. Samples of water were also received from Shikarpur, Nawabshah, Chilka village and Malir.

In all 240 samples were examined bacteriologically and 120 chemically besides 113 samples of miscellaneous articles. It has not been possible to start the work of food examination for want of equipment which is expected to arrive shortly.

The instructors in the purification of water-supplies appointed for Sind were given their course of instruction at this Laboratory. A Sub-Assistant Surgeon sent by the Hyderabad Municipality was given a similar course.

The Analyst inspected water-supply and wells of the Sind Convict Gang, Hyderabad, and advised the Medical Officer on the methods of purification. He also inspected the newly constructed Willingdon Cattle Farm well at Landi.

Dr. Bulchandani detailed from Parel for investigation into Sind Pneumonia was given every facility to carry out his investigation in the Karachi Public Health Laboratory.

SECTION X.

PERSONAL PROCEEDINGS.

106. The Deputy Sanitary Commissioners visited 777 towns and villages during the year and made reports on many.

In Western Registration District Lieutenant-Colonel A. V. Anderson, I.M.S., was in charge of the office of the Deputy Sanitary Commissioner from 1st January to 2nd June 1920 when he finally retired from the service, and Dr. Jamshyd Munsiff took over his charge and has since held it. The Deputy Sanitary Commissioner gave advice in public health matters in 7 towns and visited 33 towns for general sanitary purposes and 69 for vaccination. He made remarks in 3 Village Sanitary Inspection Books while the Inspectors of Sanitation and Vaccination wrote in 8 Books. Dr. Munsiff inspected sites at Mogra, Borivli and Bhandup and made suggestions with a view to reducing the incidence of malaria and disease generally.

The office of the Deputy Sanitary Commissioner, Gujerat Registration District, was held by Dr. Jamshyd Munsiff from 1st January to 31st May 1920. From 1st June to 10th October it was held by Major Devenport Jones, I.M.S., Civil Surgeon, Ahmedabad, in addition to his own duties and by Dr. R. V. Shiveshwarkar, B.A., D.P.H., from 11th October to the end of the year. The Deputy Sanitary Commissioner gave advice to 27 towns on public health matters, visited 26 towns for general sanitary purposes and 96 for vaccination. He wrote in 12 Village Sanitary Inspection Books while the Inspectors wrote in 57 Inspection Books.

Dr. Dalal was in charge of the office of the Deputy Sanitary Commissioner, Southern Registration District throughout the year. He also acted for the Officer in charge Plague Operations, Belgaum and Dharwar Districts, in addition to his own duties from 14th September to 20th October. He gave advice in public health matters in 26 towns and visited 47 towns for general sanitary purposes and 103 for vaccination. He made remarks in 10 Village Sanitary Inspection Books while the Inspectors of Sanitation and Vaccination wrote in 56 Books.

Dr. Accacio da Gama, D.P.H., who was in charge of the office of the Deputy Sanitary Commissioner, Central Registration District, gave advice in public health matters to 9 towns and visited 16 towns for general sanitary purposes and 126 for vaccination. He was present at the fairs held at Pandharpur and Alandi. The Inspectors of Sanitation and Vaccination made remarks in 72 Village Inspection Books.

Dr. Pinto was in charge of the office of the Deputy Sanitary Commissioner, Sind Registration District. He gave advice to 24 towns in public health matters and visited 10 towns for general sanitary purposes and 158 for vaccination.

The office of the Sanitary Commissioner for the Government of Bombay was held by Lieutenant-Colonal W. O'S. Murphy from 1st January 1920 to 26th April 1920 and afterwards by Lieutenant-Colonel H. Melhuish, D.S.O., I.M.S. During the year 23 towns were visited in connection with inspection of water-supplies, drainage and for general sanitary purposes. In February he attended the Yellow Fever Conference held at Calcutta. In May and August he inspected the "Sinhast" arrangements at Nasik and Trimbak and he attended the water-supply Committee in Ahmedabad in June. In September he inspected the anti-plague operations carried on in Belgaum and Dharwar Districts and was also present at Alandi at the time of the "Kartiki" Fair. In December he attended the Sanitary Commissioners' Conference held at Simla.

W. O'S. MURPHY, D.P.H.,
Lieutenant-Colonel, I. M. S.,
Sanitary Commissioner for the Government of Bombay.

Poona, 30th August 1921.

APPENDIX I.

ANNUAL REPORT OF THE SANITARY BOARD, BOMBAY PRESIDENCY, FOR THE YEAR 1920.

During the year under report there was no change in the constitution of the Board.

2. Four meetings were held and the following important subjects were dealt with:—

(1) Regrouping of the Municipalities for the purpose of entertaining health officers and Sanitary Inspectors, and a revision of the scale of pay for these officers.

(2) Retaining the services of Mr. Watson, a consulting Engineer who had arrived in Bombay to examine the drainage of that city, to inspect and report on the drainage of Poona as executed. His report upon the improvements required was also discussed subsequently, his recommendations being mainly adopted.

(3) The construction of a bye-pass channel from the Mutha right bank Canal to the City distributing mains to put out of use the leaky settling tanks.

(4) Proposal to supply water to Pandharpur from the Nira right bank Canal. The facts and figures put forward by the Sanitary Engineer showed conclusively that no advantage would result from fixing upon the canal as the source of supply instead of additional filtration wells in the river bed near Pandharpur.

(5) The application from the Poona City Municipality for an advance of Rs. 50,000 for completing house drainage connections in the Poona City Municipality and permission to carry out the work by their own agency.

3. Owing to financial stringency the usual grant of Rs. 1,00,000 was not placed at the disposal of the Board. To meet the promises of grants-in-aid already made, however, Rs. 6,968 were sanctioned and distributed as under:—

	Rs.
Central Division	4,663
Southern Division	2,305
Total ...	6,968

Plans and estimates for several minor sanitary schemes received from local bodies were approved by the Board.

4. The detailed preparation of the Uran Water Supply scheme to supply the 9 Kharipat villages on the lines suggested by the Collector of Kolaba, was sanctioned.

5. Grants-in-aid to local bodies, under the head 24-B Sanitation were sanctioned by Government to the following extent:—

	Rs.
(1) Mirpurkhas:—Survey expenses for drainage scheme	500
(2) Trimbak Water Supply	1,02,300
(3) Nasik:—Intercepting drain Panchavati on the left bank of the river Godavari and filling the hollows on both the banks	29,790
	17,285
	47,075
(4) Shuklatirtha Sanitary Committee:—Improvements to camping ground	200
(5) Hyderabad:—Filling in hollows	37,015
(6) Poona:—Chemical treatment for the City Supply	14,095
(7) Trial surveys and preliminary investigations of Sanitary projects	11,500

6. The principal items of progress, and the net expenditure incurred in connection with Water Supplies are stated below:—

Sind.

Karachi.—30″ Rein-forced concrete pipes to be used for the extension of the Dumlottee Conduit were manufactured, though not actually laid. Foundations for the

Engines and pump to be used in connection with infiltration well No. 5 were completed. Expenditure Rs. 46,000.

Hyderabad.—The work on two new settling tanks at Gidu and providing the outlet conduit for them was nearly completed by the local Executive Engineer, Public Works Department. The Municipality also carried out improvements in the Distribution Service, and special repairs to pumps, etc., replacing steel by Cast Iron suction pipes. Expenditure, Rs. 57,655.

Northern Division.

Ahmedabad.—The local Executive Engineer completed the construction of the central collecting main upto manhole No. 7, laid branch connections to Jack-well D, supply wells 8, 5 and 9 and lowered well No. 8. The Municipality also relaid distribution pipes in certain localities. Expenditure Rs. 62,953.

Kharaghoda.—An enclosure wall around the Udu bore which is the source of supply. was completed and a store house built near-by. Some service cisterns too were constructed. Expenditure Rs. 14,013.

Central Division.

Sirur.—The improvements to Head Works were commenced during the hot season. A supply well was sunk and connected to the jack well by laying a 6″ pipe 215′ long. Expenditure Rs. 5,885.

Sholapur.—Workshop buildings, and a gallery over the masonry tank for operating the valves were completed. Expenditure Rs. 2,715.

Barsi.—The works carried out here were (1) a cutting for laying gravitation main in mile No. 6, from chainage 2,900 to 3,600, (2) sixteen combined stand posts and hydrants, (3) masonry chambers for valves, and pillars for supporting the 10″ gravitation main in the Nalla. Expenditure Rs. 17,246.

Ahmednagar.—The Service reservoir was nearly completed. The gravitation main was laid 33,000′ in length. From the start to 13,000′ the depth of cutting varies from 13′ to 32′. The maximum depth from chainage 25,500′ to 28,000′ is about 22′.

A distribution system consisting of 6″, 4″ and 3″ pipes was laid to a total length of 5,946′. Expenditure Rs. 3,37,696.

Trimbak.—The weeds in the two tanks of Visoba and Gangasagar, which form the source of supply, were taken out and the algae in the water killed by copper sulphate. Engines and pumps were installed on both the tanks and rising mains laid to discharge water into the newly completed Service Reservoir, after chlorination by means of a plant for the purpose, located above this Reservoir, 7,000′ of Distribution mains, 3″ to 8″ in size, were laid. Twelve stand posts and surface drains to lead away waste from them were also completed. The scheme was hurried through for the Sinhasta Fair purposes. Expenditure Rs. 1,39,612.

Southern Division.

Dharwar.—A pumping installation with a well and water supply arrangements was purchased from the Madras and Southern Mahratta Railway Company for the Karnatic Arts College. Expenditure Rs. 41,777.

7. The principal items of progress and the net expenditure incurred in connection with *Drainage Schemes* are as under.

Sind.

Karachi.—A new C. I. gravitation sewer was laid near Civil lines Compressor Station. The diversion of existing main sewere from ejectors Nos. 4, 5 and 6 was completed and a large number of house connections were made. Expenditure Rs. 19,000.

Hyderabad.—Surface drains in certain localities were constructed. Expenditure Rs. 2,860.

Central Division.

Nasik.—A low masonry weir and inlet and outlet chambers were constructed to divert the flow of the Aruna Nalla into the Panchavati intercepting drain. This drain was constructed 1,300′ in length and branch drains to it about 750′ in length were also completed. Expenditure Rs. 39,139.

Sholapur.—Combined drainage for the King Edward Memorial Hospital and Head quarter Police lines was commenced in March 1920 and the excavation of trenches for the main lines was completed by the end of December. Expenditure Rs. 1,553.

Dhond.—Sanitary improvements consisting of pucca drains along the main Bazar road, cross road and dispensary roads, and an outfall drain were completed. Expenditure Rs. 16,759.

Southern Division.

Khanapur.—The main works, viz., setting up the pumping plant, laying a rising main about 1½ miles long, and excavating trenches in connection with the scheme for pumping the distillery liquor-refuse for disposal in trenches on ground provided for the purpose, were completed, and the actual pumping was commenced in December 1920. Expenditure Rs. 18,281.

8. Eighty-one schemes were under investigation by the Sanitary Engineer including minor Sanitary schemes.

9. The progress on boring operations in the Presidency is as under:—

Bavla.—The bore was further worked down to 717′ when water was struck discharging at 43,760 gallons per day. The underlying strata was ascertained to be sticky clay and the bore could not be worked further down as clay and sand commenced rushing in. An attempt to increase the discharge by using an air compressor is in progress.

Dholera.—The bore was continued with 8″ piping to a depth of 1,111′ when slightly brackish water discharging at 2,08,800 gallons per day was struck. Hoping to strike a sweet supply the boring was carried down further by means of 6″ piping to 1,140′ when trap rock was met with and a small flow of sea-water encountered. This flow was stopped by cement concrete. The flow met with at 1,111′ depth issues out now at a temperature of 114° and is used by the town for domestic purposes.

Kaira.—A boring with 4½″ piping was taken to a depth of 985′ at which point the boring tool jammed. All efforts to recover the tool failed. It is now proposed to explode the pipe by dynamite at the depth of 933′ to secure the flow encountered at that point.

Nadiad.—A boring with 10″ pipe was carried to a depth of 679′ with considerable difficulty as sand often rushed up in the bore. The rope gave way while driving in the pipe and the tool has dropped in the bore. It is being taken out.

Jálgaon.—Several borings were taken in the vicinity of the present municipal well near Mehrun Tank for ascertaining the subsoil supply of water. Trap rock was met with at a depth of 45′ or so. From the results it appears that considerable subsoil supply below the bottom of the present wells is available.

Yeola.—Two borings were taken into two different wells to a depth of 135 and 147 ft. respectively without appreciably increasing the yield in the wells.

Dumlottee.—About 20 test bores of varying depth were taken in the valley of the Malir river to ascertain the conditions of the subsoil flow with a view to utilise it for augmenting the supply to the city of Karachi.

Sawalda.—Test borings were taken to a depth of 30′ to 40′ in order to ascertain the substrata in the river bed of the Tapti, in connection with the foundations of a proposed bridge on the Bombay-Agra road, seven miles from Nardana in the District of West Khandesh. The work was stopped due to the advents of rains.

10. The staff under the Sanitary Engineer to Government is still on a reduced basis. The preparation and execution of schemes deferred for a long time have still to be postponed for want of funds and increase in cost of machinery and iron work.

A. P. MADDOCKS, B.Sc., M.Inst.C.E.,

Secretary, Sanitary Board, Bombay Presidency.

APPENDIX II (*a*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31ST DECEMBER 1920.

I.—SUMMARY.

The following summary shows the inspection and disinfection work done in the Port of Bombay in connection with out-going and in-coming vessels as well as those lying in the harbour and docks during the year ending 31st December 1920.

One thousand and sixty-six vessels of all sorts with 237,219 crew and passengers were examined during the year. The number of troops examined by the Military Embarkation Medical Staff is not included amongst passengers.

The clothing and bedding and other articles of 106,476 members of crew and passengers of out-going and in-comming vessels and of members of crews of vessels lying in the port were disinfected. Of these, 94,003 were Asiatic and African members of crews, third class or deck European and Indian passengers and 18,008 pilgrims who left the Port of Bombay for ports out of India and 12,473 were members of crews and passengers who arrived by vessels on which cases of infectious diseases had occurred during the voyage or while in the port. In addition to the above-mentioned numbers 1,342 baggage coolies and stevedores men were disinfected in order to enable certain vessels to work cargo for a few hours after medical inspection and disinfection of their crews and passengers.

Sixty vessels on which cases of infectious diseases occurred were disinfected. Out of the 18 vessels which carried pilgrims to Jeddah 17 were thoroughly cleansed and freed from rats by means of sulphur dioxide gas generated in a Clayton Apparatus. Besides the 17 out-going pilgrim-ships 14 other vessels including Hired Transports and coast guard boats of the Salt Department were fumigated. In addition to this number 38 vessels (including transports) were fumigated by the British India Steam Navigation Company's apparatus. 411 persons who had been in contact with small-pox were vaccinated. In addition to this number 16,908 out-going pilgrims were vaccinated by a special Vaccinating staff lent by the Municipality under the direction of the Police Commissioner. Inoculation with anti-plague vaccine was offered to the members of crews of plague-infected vessels but none were willing to undergo it.

II.—OUT-GOING VESSELS.

2. In accordance with Government Notification, General Department, No. 1713, dated the 15th March 1917, the medical examination of all vessels, crews and passengers, proceeding to ports out of India, and the disinfection of the clothing and bedding of all Asiatic and African members of crews, of all passengers travelling third class who were not provided with berth accommodation, of fourth class and deck passengers and of all Asiatic and African servants who sailed on such vessels were carried out before they left the Port of Bombay.

3. Eight hundred and ninety-three outward bound vessels with 102,800 crew and 73,279 passengers or a total of 176,079 persons, exclusive of troops who were examined by the Military Embarkation Medical staff, were inspected as against 1,064 vessels with 121,007 crew and 239,282 passengers (including troops) or a total of 360,289 persons during the preceding year.

4. The bedding, boxes and suspected articles of clothing, etc., of 55,192 Asiatic and African members of crews, of 20,734 third class, fourth class and deck passengers and of 18,008 pilgrims who sailed on steamers bound for ports out of India were disinfected.

5. Several vessels while in the docks failed to observe the rules laid down by Government which are aimed at preventing rats obtaining access to vessels. Paragraph 2 of the Plague Certificates attached to their Bills or Health (which certifies that the precautions prescribed for adoption in the Port of Bombay to prevent the ingress of rats into ships have been duly observed) was accordingly deleted at the time of departure.

6. A few vessels had cases of infectious diseases among the crews and passengers within 12 days or, in the case of plague and cholera, 7 days prior to their departure from this port. The Bills of Health granted to these mentioned the diseases which had occurred on board as well as the measures which had been taken before their departure for the prevention of the spread of infection on board or its introduction at other ports.

III.—Incoming Vessels.

7. In accordance with the rules prescribed under Government Notification, General Department, No. 1713, dated the 15th March 1917, medical inspection and disinfection of vessels which were actually infected or suspected of being infected were carried out. All pilgrim ships and all vessels which arrived from East African Ports were also inspected on arrival.

8. One hundred and forty-nine in-coming vessels of various kinds with crews aggregating 21,266 persons and 38,998 passengers and pilgrims were inspected during the year. Of the 149 vessels 56 including Hired Transports and Hospital Ships were found to have had cases of infectious diseases on board at the time of arrival or during the voyage. On these vessels were 3 cases of small-pox, 69 cases of measles, 26 cases chickenpox, 1 case of jigger and 6 cases of scarlatina. These cases were mostly confined to troops and to a less extent to the members of crews. Those found among the troops were disposed of by the Military Authorities on landing in Bombay and those among the crews by the Port Health Officer. The cases which occurred among the troops were removed to the Military Hospitals on shore for treatment and those detected among the European crews to the Saint George's Hospital and those among the Asiatic and African members of crews to the J. J. and Arthur Road Hospitals. The ships and the clothing and bedding of their crews were disinfected. 16 vessels with 16,089 pilgrims arrived from Jeddah but none of them had any cases of infectious diseases either during the voyage or on arrival at Bombay.

IV.—Infectious Diseases on Vessels Arriving and Departing and in the Harbour and Docks.

9. Tabular statement No. 1 gives the number of cases of infectious diseases which occurred on vessels arriving, departing and in the harbour.

It will be seen that 105 cases occurred on vessels arriving as follows:— 3 cases of small-pox, 3 cases of measles, 26 cases of chickenpox, 1 case of jigger and 6 cases of scarlatina. 10 cases of cholera (all on one pilgrim ship), 7 cases of small-pox and 1 case of measles were reported to have occurred on vessels after departure and landed at Aden. One case of measles was landed at Kamaran.

In addition to the abovementioned cases, 2 cases of plague, 6 cases of cholera, 9 cases of small-pox, 5 cases of chickenpox and 3 cases of influenzal pnuemonia occurred on vessels and sailing craft in the harbour and docks.

10. Tabular statement No. 2 gives separately details of infectious diseases on vessels in the harbour and docks. The clothing and bedding of the crews of these vessels aggregating 876 persons were disinfected. The vessels on which plague cases had occurred were deratized by fumigation.

V.—Disinfection and Fumigation of Ships.

11. During the year under report 91 vessels of all sorts were disinfected and fumigated.

12. Of the 91 vessels referred to in the foregoing paragraph 31 vessels were fumigated by means of the Clayton process. Of these 17 were outward pilgrim-vessels and 6 were Coast Guard Boats belonging to the Salt Department. In addition to these the British India Steam Navigation Company fumigated 38 steamers including transports by their own apparatus. This number is not included in tabular statement No. 1.

13. The Port Disinfection Station received every Monday clothing and bedding from various hospitals for disinfection. 364 bundles containing clothing and bedding of this kind were disinfected. The clothing of 1,342 baggage coolies to work cargo on outward bound vessels after the disinfection of their crew or after obtaining Bills of Health was disinfected at the request of their Commanders and Agents.

VI.—General Health of Shipping.

14. During the year under report 1,465 persons connected with the shipping were admitted into the various hospitals in the city. St. George's Hospital admitted 687 European patients, of whom 22 died, 641 were discharged cured and 24 remained under treatment after the 31st December 1920. The Jumsetjee Jijibhoy Hospital admitted 315 Asiatic patients of whom 36 died; the Goculdas Tejpal Hospital admitted 407 Asiatics of whom 23 died and 384 were discharged cured; and the Arthur Road and Maratha Hospitals admitted 56 patients of whom 1 died and 55 were discharged cured.

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15. No deaths occurred in connection with the cleansing of bilges of ships during the year. There were 331 accidents on board of vessels which were lying in the harbour or docks. Of these 60 proved fatal.

VII.—Red Sea Pilgrim Traffic.

A.—Outward Pilgrim Traffic.

16. In accordance with the orders of the Government of India in force the Outward Pilgrim Traffic of the year under report began on the 1st April 1920. Before the pilgrims embarked at Bombay the ships, with one exception, were thoroughly cleansed and freed from rats by means of the Clayton process. The pilgrims were medically inspected and their clothing and bedding disinfected before they were allowed to embark.

17. The names of the ships, the numbers of pilgrims carried by them and the date on which they left Bombay for Jeddah are given below :—

No.	Name of Vessel.	Number of Pilgrims sailed.	Date of Departure.
			1920.
1	S.S. "Jeddah"	427	1st April.
2	S.S. "Hejaz"	741	17th April.
3	S.S. "Khosru"	916	30th April.
4	S.S. "Jeddah"	1,206	11th May.
5	S.S. "Koweit"	1,082	25th May.
6	S.S. "Humayun"	938	29th May.
7	S.S. "Khosru"	911	15th June.
8	S.S. "Jeddah"	1,194	21st June.
9	S.S. "Nurani"	758	24th June.
10	S.S. "Nairung"	761	26th June.
11	S.S. "Dara"	1,437	1st July.
12	S.S. "Shuja"	1,248	8th July.
	S.S. "Akbar" *	1,172	20th July.
13	S.S. "Zayani"	1,008	26th July.
14	S.S. "Khosru"	909	27th July.
15	S.S. "Sealda"	1,502	2nd August.
16	S.S. "Akbar"	917	3rd Augnst.
17	S.S. "Dara"	1,429	4th August.
18	S.S. "Nurani"	624	6th August.
		18,008	

* The S.S. "Akbar" put back from sea arriving at Bombay on 27th July owing to an outbreak of fire.

18. It will be seen that 18,008 pilgrims left during the season as aginst 9,218 pilgrims in the previous year.

19. The classification of pilgrims as far as it is obtainable is as follows :—

630	Bombay Presidency (including Sind).	1,590	British Malay.
295	Bombay City.	191	Dutch Java.
945	Madras.	523	Persia.
6,069	Bengal.	198	Mesopotamia.
892	Assam.	229	Russia.
390	United Provinces and Oudh.	27	China.
599	Punjab and North-West Frontier.	152	Afghanistan.
60	Rajputana.	13	Baluchistan.
124	Central Provinces.	9	Nepal.
1,250	Bihar and Orissa.	201	Muscat.
19	Burmah.	12	Africa.
8	Ceylon.	2,593	Unclassified.
989	Native States.		
12,270		5,738	

Total ... 18,008

20. Sixteen thousand nine hundred and eight out-going pilgrims were vaccinated before starting by a special staff placed under the Police Commissioner by the Municipality. Besides these some pilgrims from other provinces and Native States had been vaccinated before leaving their homes for Bombay.

21. The S.S. "Akbar" which sailed for Jeddah with 1,172 pilgrims on the 20th July was compelled to put back to Bombay arriving there on the morning of 27th July owing to an outbreak of fire on board. The fire caused 14 cases of burns amongst the pilgrims of whom 2 died. The vessel had to remain in the port until the 3rd August on which date she again proceeded to Mecca with 917 pilgrims (including 129 Hospital Staff for Jeddah).

22. The S.S. "Dara" which left Bombay for Jeddah with practically the last batch of 1,429 pilgrims was not fumigated because to have done so would have delayed the ship and have caused the pilgrims to miss the Haj.

23. During the pilgrim-season there were two out-breaks of cholera among the pilgrims in the Mussafirkhanas. The first out-break began on 2nd June and the Mussafirkhanas were declared free on 23rd June. The second out-break began on 7th July and the Mussafirkhanas were declared free on 1st August. During the first outbreak there were 85 attacks and 50 deaths. During the second, there were 54 attacks and 36 deaths.

24. During the periods of these two outbreaks of cholera 8 vessels sailed with pilgrims from Bombay but fortunately none of them, excepting the S.S. "Shuja" which left on 8th July, subsequently developed any case of cholera during the voyage to Jeddah. 10 cases of cholera occurred on this ship between Bombay and Aden, 8 among the pilgrims and 2 among the crew. All proved fatal. No further cases occurred after the vessel left Aden.

25. Ninety-seven deaths occurred at sea among the out-going pilgrims. They were chiefly due to Senile debility, Phthisis, Heat Apoplexy, Chronic bronchitis, Cardiac failure, Malarial fever, Sunstroke, Diarrhœa, Pnuemonia, Dysentery, Hemiplegia, Cholera, Renal Dropsy, etc.

26. It was found impossible to secure the services of a second medical officer for the S.S. "Zayani" which left Bombay with 1,008 pilgrims on 26th July. She was allowed as an exceptional case, to proceed with only one medical officer.

27. The Quarantine Camp at Camaran was opened during the pilgrim-season under report. The necessary Medical, Mechanical and other staffs required for the camp were provided by the Surgeon-General with the Government of Bombay and they were despatched to Kamaran by various pilgrim ships.

B.—Inward Pilgrim Traffic.

28. During the year under report 16,089 pilgrims arrived from Jeddah in 16 vessels as tabulated in statement No. 3 which is appended to this report.

29. Two hundred and thirty-four deaths occurred among the pilgrims during the return voyage. The causes of deaths are chiefly attributed to Senile decay, Tuberculosis, Diarrhœa, Dysentery, Pnuemonia, Heart failure, Marasmus, Phthisis, Gangrene, Chronic Malaria, Bronchitis, etc.

30. None of the pilgrim-ships had any cases of infectious diseases during the return voyage.

VIII.—Sanitary State of the Harbour and the Foreshore.

31. The sanitary state of the harbour and of the various bandars, basins and docks was fair.

IX.—Cholera, Small-pox and Plague in the City of Bombay.

32. During the year under report 119 deaths from cholera, 294 deaths from small-pox and 282 deaths from plague occurred in the City of Bombay as against 8,455 from cholera, 780 from small-pox and 702 from plague during the preceding year.

X.—General.

33. Lieut.-Colonel W. M. Houston, I.M.S., was in charge of the Port Health Department from 1st January to 3rd April and again from 1st to 31st December. Lieut.-Colonel S. E. Prall, I.M.S., held officiating charge from 4th April till 30th November.

34. The undersigned regrets to report that the permanent Lady Doctor, Mrs. S. Harrison, who was on sick furlough from 17th June 1919, died at Nasik on 9th November 1920. Her place has been filled by Miss J. B. Engineer.

35. The members of the Medical, Clerical and Sanitary Police Staffs performed their duties satisfactorily.

36. The services of a Commissioned Medical Officer and a Lady Doctor had to be requisitioned on a few occasions, as usual, when work was heavy.

W. M. HOUSTON, M.B., D.P.H.,
Lieut.-Colonel, I. M. S.,
Health Officer of the Port.

Bombay, Port Health Office,
New Customs House, dated 3rd March 1921.

TABLE No. 1.

The following Tabular Statement gives a summary of the Shipping of the Bombay Port and the work done in connection therewith for the year ending 31st December 1920 :—

Vessels including Country craft.	Number of vessels inspected.	Number of persons inspected.	Number of Asiatic Crew and 3rd Class or Deck Passengers disinfected.	Number of Vessels.		Number of persons vaccinated.	Diseases and cases of each.								
				Disinfected.	Fumigated.		Plague.	Cholera.	Smallpox.	Measles.	Chickenpox.	Jigger.	Scarlatina.	Influenzal pneumonia.	Typhus.
Entered ...	149	60,264	11,597	35	1	...	...	...	3	69	26	1	6	...	...
Left ...	893	176,079	94,003	...	17	16,908	...	10	7	2	...	...	...	...	...
In harbour during the year.	24	876	876	25	13	411	2	6	9	3	5	...	...	3	...
	1,066	237,219	106,476	60	31	17,319	2	16	19	74	31	1	6	3	...
Total for 1919 ...	1,348	430,786	125,649	176	61	9,109	17	113	38	12	33	2	...	...	2

TABLE No. 2.

The following table includes all Steam Ships, Square-rigged vessels and Native Sailing Craft which became infected while lying in the Port of Bombay during the year 1920 :—

Months.	Number of persons who were infected with infectious disease in the Docks and Bandars.		Total number of infected vessels.	Total number of infectious diseases in the Bombay Harbour.						Number of crew disinfected.
	Plague.	Cholera.		Plague.	Cholera.	Smallpox.	Measles.	Chickenpox.	Typhus.	
1920.										
January	...	...	1	...	...	1	...	...	...	60
February	...	...	3	...	...	1	...	...	...	78
March	...	...	1	...	...	...	...	...	...	40
April	...	...	6	...	...	5	...	1	...	193
May	...	...	1	...	...	...	...	1	...	161
June	...	1	4	...	2	1	1	1	...	201
July	...	...	4	...	3	1	...	...	...	81
August	...	...	3	2	1	...	...	2	...	56
September	...	...	...	...	...	...	...	...	...	...
October	...	...	...	...	...	...	...	...	...	...
November	...	...	...	...	...	...	...	...	...	...
December	...	...	1	...	...	...	2	...	...	6
Total ...	...	1	24	2	6	9	3	5	...	876

TABLE No. 3.

Statement showing the number of pilgrims who arrived in Bombay from Mecca by vessels during the year 1920 :—

No.	Name of Ship.	Date of arrival.	Number of Crew inspected.	Numebr of Pilgrims inspected.	Number of deaths during voyage.	Number of cases of infectious disease on board.		Remarks.
						On arrival.	During voyage.	
		1920.						
1	S.S. "Jeddah" ...	13th September ...	126	1,120	19	...	...	
2	S.S. "Dara" ...	14th do. ...	118	1,419	25	...	...	
3	S.S. "Khosru" ...	18th do. ...	110	892	12	...	...	
4	S.S. "Koweit" ...	21st do. ...	108	1,296	35	...	...	
5	S.S. "Nairung" ...	3rd October ...	107	971	17	...	...	
6	S.S. "Shuja" ...	6th do. ...	136	1,554	20	...	...	
7	S.S. "Hejaz" ...	11th do. ...	100	980	22	...	...	
8	S.S. "Jeddah" ...	15th do. ...	128	1,433	31	...	...	
9	S.S. "Dara" ...	19th do. ...	118	1,713	30	...	...	
10	S.S. "Zayani" ...	22nd do. ...	88	418	1	...	...	
11	S.S. "Nurani" ...	28th do. ...	107	1,042	2	...	...	
12	S.S. "Homayun" ...	5th November ...	99	1,214	10	...	...	
13	S.S. "Shuja" ...	22nd do. ...	126	535	6	...	...	
14	S.S. "Jeddah" ...	3rd December ...	125	1,477	4	...	...	
15	S.S. "Zayani" ...	9th do. ...	87	13	...	...	...	
16	S.S. "Khosrou"	11th do. ...	110	12	...	...	...	
		Total ...	1,793	16,089	234	...	...	

APPENDIX II (*b*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF KARACHI FOR THE YEAR ENDING 31ST DECEMBER 1920.

I.—Outgoing Vessels.

During the year under report 350 steam vessels outward bound for ports out of India were medically inspected and given Bills of Health by the Health Officer of the Port.

Of this number 108 vessels were proceeding to Aden, the Red Sea and Europe, and 242 to other ports out of India including the Persian Gulf.

Bills of Health were also granted after medical inspection to 544 country boats.

In accordance with the Port Health Regulations issued by Government, the Indian crews and deck and third class passengers of all vessels and country craft proceeding to Ports out of India, were medically inspected and their clothing, bedding and other articles disinfected at the Port Disinfecting Station, Kiamari, prior to their departure from the Port of Karachi.

II.—Incoming Vessels.

During the year under report 45 vessels which arrived in quarantine were inspected on arrival.

Of these 45 vessels 2 arrived from East African Ports, 4 from Jeddhah *vid* Aden, and the remaining 39 hailed from various other ports.

Fifteen country boats also arrived in quarantine from East African Ports, and were duly inspected on arrival.

III.—Synopsis of Inspection and Disinfection Performed.

The following tabular statement shows the number of vessels, crew and passengers inspected during the year under report :—

	Vessels.			Crews and Passengers.		
	Steamers.	Country boats.	Total.	Steamers.	Country boats.	Total.
Incoming	45	15	60	19,975	181	20,156
Outgoing	350	544	894	104,933	7,261	112,194
					Total ...	132,350

Of these 132,350 persons (crew and passengers) who were medically inspected on their arrival at, or departure from, the Port of Karachi, 57,731, persons (crew and passengers) also had their clothing, bedding and other articles disinfected.

IV.—Miscellaneous Disinfection.

On several occasions during the year the clothing and bedding of patients suffering from infectious diseases, as well as the clothing and bedding of contracts, were received for disinfection from the Epidemic Diseases Hospital, the Civil Hospital and other Institutions in Karachi, also from private individuals, and were duly disinfected by saturated steam under pressure in the Equifex stoves of the Port Disinfecting Station, Kiamari.

In addition to the above a large number of articles, such as mattresses, blankets, pillows, pillow-covers, sheets, towels, shirts, trousers, jackets, pyjamas, etc., which were sent for disinfection from the Embarkation Department, Kiamari, the Military Clothing Depôt, Karachi, the Officer Commanding, R.A., Manora, the Lady Dufferin Hospital, the Epidemic Diseases Hospital, and the Health Officer of the Karachi Municipality were also duly disinfected at the Port Disinfecting Station during the year under report.

V.—Plague.

No cases of this disease occurred during the year under report.

VI.—Cholera.

No cases of this disease occurred during the year.

VII.—Small-Pox.

Three cases of Small-Pox were removed from two incoming vessels, *viz.* one from the S.S. " Pankura " and two from a country boat. The necessary precautionary measures (removal of the patients to hospital, vaccination, disinfection, etc.) were duly carried out and no further cases occurred.

Telegraphic information have been received from the Port Health Officer, Bombay, to the effect that a member of the crew of the S.S. " City of Exeter " had been removed to hospital in Bombay suffering from small-pox, on the vessel's arrival at Karachi precautionary measures were duly carried out, and the crew and passengers on being medically inspected were found to be free from small-pox. No further cases of this desease occurred on board the vessel.

VIII.—Chicken-Pox.

No cases occurred during the year under report, but the S.S. " Koening Frederick August ", which called at Karachi en route to Bombay from Basra, reported 4 convalescent cases of chicken-pox among the Indian crew. No further cases occurred on board this vessel.

IX.—Measles.

Three cases of measles were removed to the Epidemic Diseases Hospital, Karachi, during the year under report, *viz.*, one case each from the H.T. " Kandy ", the S.S. " Merkara " and the S.S. " Moshabra ". The necessary precautionary measures were duly carried out on board, and no further cases were reported.

X.—Parotitis (Mumps).

During the year seven cases of mumps were removed from 4 incoming vessels, *viz.*, one from the S.S. " Penbrokeshire ", two from the S.S. " Chakla ", one from the S.S. " Ula " and three from the S.S, " Bankura ". The quarters which had been occupied by the patients and all the crews, effects (clothing, bedding, etc.) were duly disinfected before the vessels concerned sailed from Karachi to their respective destinations.

XI.—Yellow Fever.

No cases arrived at this port during the year.

XII.—Jigger.

No cases of this disease were reported or detected during the year.

XIII.—Sleeping Sickness.

No cases of this disease were reported or detected during the year.

XIV.—Scarlet Fever.

During the year under report four cases of this disease (among British Troops) were removed to the Station Hospital, Karachi, from the S.S. " Sudan ". Precautionary measures were duly taken, and no further cases occurred.

XV.—Influenza.

During the year under report thirteen cases of influenza (*viz.* 4 among Indian crews and 9 among troops) were removed to hospital for treatment, and necessary precautionary measures were duly carried out on board the vessels concerned.

XVI.—Non-Notifiable Diseases.

During the year under report 11 cases of all sorts (*e.g.* malarial fever, pneumonia, typhoid fever, etc.) were detected in the course of the usual medical inspection of crews and passengers before embarkation, and were duly removed for treatment to the Civil Hospital, Karachi.

XVII.—Deaths from Non-Notifiable Diseases.

During the year twenty-seven deaths from various causes (*e.g.* heart failure, pneumonia, debility, heat stroke, etc.) were reported as having occurred on board of vessels either in Karachi harbour or during the voyage to Karachi.

XVIII.—Emigrants.

During the year seventy-seven Emigrants proceeding to Mombassa (East Africa), *viâ* Bombay were medically examined by the Health Officer of the Port in his capacity as Medical Inspector of Emigrants, and given certificates that they were in a fit state of health to undertake the voyage to East Africa as required in Section 65 (1) of the Indian Emigration Act of 1908.

XIX.—Red Sea Pilgrim Traffic.

A.—Outward Pilgrim Traffic.

In accordance with the instructions of Government, the Port of Karachi was open for the embarkation of Mahomedans going on pilgrimage to Mecca *viâ* Jeddah, and five ships carrying 4,081 pilgrims, who duly embarked at Karachi, sailed hence for Jeddah *viâ* Aden during the Haj season of 1920.

(The number of pilgrims who sailed from Karachi during the previous Haj season was 2,903.)

Before they were allowed to embark the pilgrims were medically inspected and their clothing and bedding disinfected at the Port Disinfecting Station, Kiamari, and the ships in which they voyaged were thoroughly cleansed and freed from rats by means of the Clayton Apparatus.

The names of the ships, the number of pilgrims carried by them and the dates on which they sailed from Karachi for Jeddah, are given below in tabular form:—

No.	Name of vessels.	Number of Pilgrims.	Date of departure.
1	S.S. "Hejaz"	728	5th June 1920.
2	S.S. "Hamayun"	934	4th July 1920.
3	S.S. "Hejaz"	729	14th July 1920.
4	S.S. "Nairang"	758	30th July 1920.
5	S.S. "Hamayun"	932	3rd August 1920.
	Total ...	4,081	

B.—Inward Pilgrim Traffic.

The following table shows the number of pilgrims who returned to Karachi from Jeddah, the names of the ships in which they travelled, and other particulars :—

No.	Name of vessels.	Date of arrival.	No. of crew.	No. of pilgrims for Karachi.	No. of pilgrims for Bombay.	No. of deaths during voyage.	No. of cases of infectious disease during voyage or on arrival.
1	S.S. "Iran" ...	28-1-1920	99	14	84	*Nil.*	*Nil.*
2	S.S. "Hamayun" ...	15-9-1920	98	1,149	*Nil.*	15	*Nil.*
3	S.S. "Nurani" ...	16-9-1920	108	942	*Nil.*	7	*Nil.*
4	S.S. "Shuja" ...	20-11-1920	126	1,500	212	6	*Nil.*
		Total ...	431	3,605	296	28	*Nil.*

In all 3,605 pilgrims returned to Karachi, while 296 pilgrims, who were bound for Bombay, duly proceeded to that port in the above mentioned vessels.

(The number of pilgrims who returned to Karachi during the previous Haj season was 2,569.)

None of the pilgrim ships had any cases of infectious disease during the voyage or on arrival at Karachi. The twenty-eight deaths, which occurred at sea among the returning pilgrims, were reported to be due to old age, general debility, chronic diarrhœa, etc.

XX.—Clayton Apparatus.

During the year under report thirteen steamers were claytonised (fumigated) by means of the Clayton Disinfecting Apparatus before sailing from Karachi for ports out of India.

XXI.—Sanitary State of the Harbour.

The sanitary state of the harbour was satisfactory.

XXII.—Port Health Establishment.

The undersigned was in charge of the Port Health Department throughout the year under report.

The following list shows the names of the Medical Staff who did duty under the Health Officer of the Port during the year :—

Names.	Period of service.		
	Y.	M.	D.
Assistant Surgeon B. F. Khambatta, M.B., B.S. ...	1	0	0
Sub-Assistant Surgeon Baharsing Toursing Advani ...	1	0	0
Mrs. Lake, Nurse-Inspectress ...	1	0	0

The above-mentioned Medical Staff carried out the responsible duties which fell to their share tactfully and efficiently.

The Clerk, Mr. Mahomed Jaffer Sheikh Ibrahim, performed his duties with zeal and to my entire satisfaction.

The members of the Steam-Launch, Disinfecting Station and Clayton Apparatus Establishments worked satisfactorily.

H. CAREY VENIS,
L.R.C.P., L.R.C.S., D.P.H,
Health Officer of the Port of Karachi.

Port Health Office,
Kiamari, Karachi, dated 7th January 1920.

APPENDIX II (*c*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF ADEN FOR THE YEAR 1920.

I.—General Remarks.

One thousand two hundred and ninety-five vessels and rigged vessels were granted bills of health during the year.

Of the above number 963 were sailing under the British flag and 332 under Foreign flags.

Bills of health issued to vessels having had cases of infectious diseases on board were annotated according to the circumstances of each case.

One thousand and thirty-six bills of health were granted to Dhows during the year.

The accompanying Table A gives a list of vessels on board of which infectious diseases existed on arrival. In the case of these vessels all sanitary precautions were taken to prevent the spread of the disease.

The following cases of infectious diseases were landed from the shipping :—

Small-pox	... 10	Chicken-pox	... 5
Measles	... 47	Influenza	... 169
Pneumonia (Influenzal)	... 10	Cholera	... 7

II.—Pilgrim Traffic.

Thirty-six ships carrying pilgrims passed through the port during the year. All were medically examined; but they were not granted pratique.

Year.	No. of ships.	No. of pilgrims.	No. of deaths.
1920	36	34,508	105

III.—Table A.

The following is the list of vessels on board of which cases of infectious diseases existed on arrival at this port during the year :—

Date.	Name of Ship.	Nationality.	From	To	No. of cases.	Remarks.
2nd January 1920 ...	H. T. Franz Ferdinand ...	British ...	Suez ...	Bombay ...	*7 Infl.	Landed.
8th January 1920	S. S. Neuralia ...	„ ...	London ...	„ ...	Infl.	Existed on board.
8th January 1920 ...	S. S. Africa ...	„ ...	Hodeida ...	Hodeida ...	5 Infl.	On board.
9th January 1920 ...	S. S. Karmala ...	„ ...	London ...	Bombay ...	1 Mls.	Isolated.
9th January 1920 ...	R. I. M. S. Northbrook ...	„ ...	Suez ...	Penang ...	*60 Infl.	Landed.
9th January 1920 ...	H. T. Kildonan ...	„ ...	„ ...	Bombay ...	Infl.	Existed.
10th January 1920 ...	H. T. Kildonan Castle.	„ ...	„ ...	„ ...	*38 Infl.	Landed.
15th January 1920 ...	H. T. Huntsand ...	„ ...	„ ...	„ ...	*21 Infl.	Landed.
Do.	Do.	„ ...	„ ...	„ ...	10 Pneumonia.	Landed.
Do.	Do.	„ ...	„ ...	„ ...	1 C. P.	Landed.
17th January 1920 ...	H. T. Mawari ...	„ ...	P. Said ...	Basra ...	3 Mls.	Landed.
Do.	Do.	„ ...	„ ...	„ ...	1 Mls.	Isolated on board.
22nd January 1920 ...	H. T. Franz Ferdinand ...	„ ...	Karachi ...	Suez ...	1 Infl.	Landed.
28th January 1920 ...	S. S. Khyber ...	„ ...	London ...	Bombay ...	6 Mls.	Isolated on board.
1st February 1920 ...	H. T. Kildonan ...	„ ...	Bombay ...	England ...	1 S. P.	Landed.
Do.	Do.	„ ...	„ ...	„ ...	Infl.	Existed on board.
3rd February 1920 ...	H. T. Tagus ...	„ ...	„ ...	L'Pool ...	*1 Infl.	Landed.
14th February 1920 ...	S. S. Umzambi ...	„ ...	Calcutta ...	Mombasa ...	1 S. P.	Landed.
3rd March 1920 ...	S. S. Nore ...	„ ...	London ...	Bombay ...	1 Mls.	Isolated on board.
4th March 1920 ...	Northbrook ...	„ ...	Suez ...	„ ...	1 Infl.	Landed.
17th March 1920 ...	S. S. Sardinia ...	„ ...	London ...	„ ...	1Mls.	Landed.
28th March 1920 ...	S. S. Alexandra ...	„ ...	Bombay ...	U. K. ...	1 S. P.	Landed.
30th March 1920 ...	S. S. Morea ...	„ ...	„ ...	Marseilles ...	2 Infl.	Isolated on board.
Do.	S. S. Margha ...	„ ...	London ...	Bombay ...	1 Mls.	„
3rd April 1920 ...	S. S. Trazos ...	Port ...	„ ...	„ ...	1 Mls.	On board.
5th April 1920 ...	S. S. Huntsgram ...	British ...	U. K. ...	„ ...	2 Mls.	Landed.
6th April 1920 ...	S. S. Meteor ...	„ ...	Suez ...	„ ...	3 Mls.	On board.
Do.	H. T. Huntsand ...	„ ...	„ ...	„ ...	*8 Infl.	Landed.
8th April 1920 ...	S. S. Main ...	„ ...	P. Said ...	„ ...	Infl.	Existed on board.

* Denotes the cases landed and treated by the Military Authorities in Aden.

Date.	Name of Ship.	Nationality.	From	To	No. of cases.	Remarks.
9th April 1920 ...	S. S. Northbrook ...	British ...	P. Sudan ...	Bombay ...	1 C. P.	Existed on board.
11th April 1920 ...	S. S. Falcon ...	,, ...	Mokala ...	Berbera ...	1 S. P.	Landed.
16th April 1920 ...	H. T. Assaye ...	,, ...	P. Sudan ...	Bombay ...	1 C. P.	Existed on board.
17th April 1920 ...	S. S. Guildford Castle.	,, ...	London ...	Durban ...	1 Mls.	Isolated.
11th May 1920 ...	H. T. Shuja ...	,, ...	Suez ...	Bombay ...	*22 Infl.	Landed.
3rd June 1920 ...	S. S. Stolberg ...	,, ...	Colombo ...	Falmouth ...	2 S. P.	Landed.
18th June 1920 ...	S. S. Jeseric ...	,, ...	Cochin ...	N. York ...	1 S. P.	Landed.
26th June 1920 ...	S. S. Novara ...	,, ...	Bombay ...	London ...	3 Infl.	Landed.
8th July 1920 ...	S. S. Naldera ...	,, ...	,, ...	,, ...	2 C. P.	On board.
15th August 1920 ...	S. S. Osterley ...	,, ...	Sydney ...	,, ...	25 Mls.	,,
9th October 1920 ...	S. S. Malwa ...	,, ...	London ...	Bombay ...	1 C. P.	Isolated.
3rd December 1920 ...	S. S. Bahrein ...	,, ...	Bombay ...	,, ...	1 S. P.	Landed.
13th December 1920...	S. S. General ...	,, ...	Mogodixo ...	P. Said ...	1 Mls.	On board.

N.B.—C. P. stands for Chicken-pox, Infl. for Influenza, S. P. for Small-pox, Mls. for Measles.

* Denotes the cases landed and treated by the Military Authorities in Aden.

† Cases landed and treated by the Port Health Department.

IV.—The following are the names and other information regarding the Pilgrim ships, which passed through Aden, during the year under report :—

No.	Date.	Name of Ship.	Nationality.	From	To	Number of		
						Pilgrims.	Infectious cases.	Deaths.
1	21st January 1920 ...	S. S. Iran ...	British ...	Jeddah ..	Karachi ...	98	...	...
2	8th April 1920 ...	,, Jeddah ...	,, ...	Bombay ..	Jedda *via* Kamran ...	269	1	...
3	25th April 1920 ...	,, Hejaz ...	,, ...	,, ...	,, ...	735	...	...
4	8th May 1920 ...	,, Khosrou ...	,, ...	,, ...	,, ...	913	...	3
5	19th May 1920 ...	,, Jeddah ...	,, ...	,, ...	,, ...	1,197	1	5
6	2nd June 1920 ...	,, Koweit ...	,, ...	,, ...	Jedda ...	1,076	1	5
7	5th June 1920 ...	,, Homayun ...	,, ...	,, ...	,, *via* Kamran ...	937	...	1
8	15th June 1920 ...	,, Hejaz ...	,, ...	Karachi ...	,, ...	727	...	1
9	27th June 1920 ...	,, Khosrou ...	,, ...	Bombay ...	,, ...	911	...	4
10	1st July 1920 ...	,, Jeddah ...	,, ...	,, ...	,, ...	1,189	...	5
11	7th July 1920 ...	,, Nurani ...	,, ...	,, ...	Jedda ...	755	1	2
12	8th July 1920 ...	,, Nairang ...	,, ...	,, ...	,, *via* Kamran ...	761	...	...
13	11th July 1920 ...	,, Dara ...	,, ...	,, ...	Jedda ...	1,433	...	5
14	13th July 1920 ...	,, Homayun ...	,, ...	Karachi ...	,, *via* Kamran ...	934	...	...
15	17th July 1920 ...	,, Koweit ...	,, ...	Basra ...	Jedda ...	1,068	...	1
16	18th July 1920 ...	,, Shuja ...	,, ...	Bombay ...	,, *via* Suez ...	1,240	...	10
17	28th July 1920 ...	,, Hejaz ...	,, ...	Karachi ...	Jedda *via* Kamran ...	728	...	2
18	5th August 1920 ...	,, Jeddah ...	,, ...	Basra ...	Jedda ...	1,146	...	4
19	7th August 1920 ...	,, Zayani ...	,, ...	Bombay ...	,, *via* Kamran ...	1,005	...	3
20	8th August 1920 ...	,, Nairang ...	,, ...	Karachi ...	,, ...	760	...	1
21	10th August 1920 ...	,, Homayun ...	,, ...	,, ...	,, ...	930	...	2
22	Do. ...	,, Khosrou ...	,, ...	Bombay ...	,, ...	907	...	2
23	12th August 1920 ...	,, Akbar ...	,, ...	,, ...	Jedda ...	1,096	...	...
24	Do. ...	,, Dara ...	,, ...	,, ...	,, ...	1,428	...	1
25	Do. ...	,, Sealda ...	,, ...	,, ...	,, *via* Kamran ...	1,501	...	1
26	14th August 1920 ...	,, Nurani ...	,, ...	,, ...	Jedda ...	623	...	1
27	6th September 1920...	,, Jeddah ...	,, ...	Jedda ...	Bombay ...	1,132	...	7
28	7th September 1920...	,, Dara ...	,, ...	,, *via* Kamran,	,, ...	1,421	...	7
29	8th September 1920...	,, Homayun ...	,, ...	,, ...	Karachi ...	1,158	...	6
30	10th September 1920.	,, Khosrou ...	,, ...	,, ...	Bombay ...	900	...	3
31	Do.	,, Nurani ...	,, ...	Jedda ...	Karachi ...	948	...	1
32	24th September 1920.	,, Nairang ...	,, ...	,, *via* Kamran,	Bombay ...	984	...	5
33	29th September 1920.	,, Shuja ...	,, ...	Jedda ...	,, ...	1,563	...	9
34	13th October 1920 ...	,, Zayani ...	,, ...	,, ...	,, ...	418	...	1
35	28th October 1920 ...	,, Homayun ...	,, ...	,, *via* Kamran.	,, ...	1,220	...	4
36	27th November 1920.	,, Zayani ...	,, ...	Jedda ...	Bombay *via* Mokalla ...	397	...	...

V.—Statement showing the number of cases treated at the Infectious Diseases Hospital, Maalla, during the year, under report:—

Year.	Remaining as per last return.	Admissions.	Deaths.	Protected.	Unprotected.
1920	9	100	6	37	66

Source of admission.						Europeans
Shipping.	Steamer Point.	Maalla.	Crater.	Shaik Othman.	Interior.	
18	42	10	21	8	10	5

N.B.—Of the above number, there were 87 cases of Small-pox, 2 Measles, 8 Chicken-pox and 12 suspicious cases kept under observation for Small-pox, etc.

VI.—Statement showing the tubes received, their cost and the vaccination operations performed during the year at the Port and the European General Hospital, Aden:—

No. of tubes, Bombay Municipality Vaccine.	Cost.	Total No. of operations performed.	Primary.	Re-vaccination.
	Rs.			
436	109	417	150	267

Result.

Successful.		Unsuccessful.		Unknown.	
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Revaccination.
74	60	18	20	58	187

VII.—Flint Island was used at different times as a Quarantine Station and as a Quarantine Hospital during the year. The following contacts were detained on it:—

Contacts of Influenza cases	29
Contacts of Small-pox cases	5
Contacts of Measles cases	2

The following cases were treated on Flint Island, having been removed ill from ships, or having developed their disease while under observation, as contacts:—

Influenza	6
Measles	2
Cholera	7

The cases of Cholera were from the S. S. War Bahadur, which had had two deaths before arrival from Abadan. They were of a late and mild type and none were fatal.

VIII.—Establishment.

Lieut.-Colonel J. L. Marjoribanks, I.M.S., held the appointment of Port Health Officer, Aden, from 1st January to 31st December 1920.

IX.—Office Establishment.

Captain A. Baldwin D'Sousa, I.M.D., held the charge of the clerical duties of the Port Health Office from 1st January to 7th April 1920, and was relieved by Mr. Othman Abdul Kader on the 8th April 1920, a full time clerk having been sanctioned in G. O., G. D., No. 2323 of 1920. The latter held the appointment up to the 31st December 1921.

Peon Ali Ahmed was granted leave from 11th September to 5th November 1920 and Abdo Ahmed was appointed to act for him. He was confirmed in his appointment in place of the permanent incumbent who was sent away for overstayal of leave. He continues his duties till the 31st December 1920.

X.—Launch Establishment.

1. Driver Hussein Noman from 1st January to 31st December 1920.
2. Sucani Mohd. Magon do.
3. Stoker Abdo Noman do.
4. Lascar Ali Magon do.

XI.—Disinfecting Stove.

The services of the fireman were maintained for the care of the Disinfecting Stove during the year and his services were made permanent in accordance with G. O., G. D., No. 4607 of 19th April 1920.

J. L. MARJORIBANKS,
Lieut.-Colonel, I. M. S.,
Health Officer, Port of Aden.

APPENDIX III.

The following table shows when drainage systems and water-works were completed in the towns mentioned therein, with the average annual death-rate for the five-year period preceding the introduction and also the ratio for the five-year period ending with the year under report, exclusive of recorded plague mortality :—

The rural death-rates for each district are added for comparison.

District.	Táluka.	Town.	Date of completion of works of		Average annual death-rate for the five-year period ending with 1920 exclusive of plague.	Average annual death-rate for the five-year period preceding the introduction of drainage or water-supply or both.	Death-rate in rural circles for the year 1920.	Plague mortality in rural circles for the year 1920.
			Drainage.	Water-supply.				
1	2	3	4	5	6	7	8	9
.....	.....	Bombay	a1879	b1892	49·13	27·98	.....	.....
West Khándesh	Dhulia	Dhulia	.....	1896	29·80	32·50	31·31	6·95
Ahmednagar	Ahmednagar	Ahmednagar	.....	1897	36·10	55·65	17·66	.....
Surat	Chorási	Surat	.....	1898	35·37	39·77	27·56	.....
Ahmedabad	Daskroi	Ahmedabad	c1893	1891	54·17	45·21	29·87	.....
Karáchi	Karáchi	Karáchi	c1895	1894	51·38	35·15	6·77	.....
Sukkur	Sukkur	Sukkur	.....	1895	30·43	28·70	19·62	.....
Thána	Bándra	Bándra	.....	1896	29·50	23·01	27·89	·72
Kolába	Panvel	Panvel	.....	1895	23·61	19·50	39·06	.....
Dhárwár	Hubli	Hubli	.....	1894	34·28	25·70	42·54	9·57
Ahmedabad	Viramgám	Viramgám	d1893	.....	51·14	69·28	34·13	.....
East Khándesh	Jalgaon	Jalgaon	.....	1909	35·42	31·56	31·50	7·17
Sholápur	Pandharpur	Pandharpur	.....	1911	50·65	49·98	18·09	.....
Násik	Násik	Násik	.....	1913	44·70	52·73	40·24	.....
Bijápur	Bijápur	Bijápur	.....	1913	32·66	30·08	22·99	.....
Poona	Haveli	Poona	1916	.....	52·25	36·47	20·40	·0

a Drainage works commenced in 1879 are still in progress.

b Thána water-works completed in 1892. Besides there are Vehár and Tulshi water-works.

c Drainage system partially introduced.

d In 1893 the gradient of the channel round the town was improved to carry away the sullage water that used to accumulate and stagnate round the town.

APPENDIX IV.

ANNUAL FORM No. I.—*Showing the Births registered in the Districts of the Bombay Presidency during the year 1920.*

1	2	3			4			5			6	7	8	9		
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1911.			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of Births over Deaths per 1,000 of Population.	Excess of Deaths over Births per 1,000 of Population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.				Male.	Female.	Total.
	Western Registration District.															
1	East Khándesh ..	521,546	512,668	1,034,214	22,384	20,823	43,207	21·64	20·13	41·77	107·50	13·10	..	23·86	22·20	46·06
2	West Khándesh ..	293,300	287,380	580,680	12,206	11,439	23,645	21·02	19·70	40·72	106·79	16·73	..	23·79	22·84	46·63
3	Násik	455,045	448,599	903,644	15,746	14,659	30,405	17·43	16·22	33·65	107·42	1·40	..	21·08	19·82	40·90
4	Thána	456,673	424,235	880,908	11,131	10,456	21,587	12·63	11·87	24·51	106·45	..	11·08	15·58	14·86	30·44
5	Kolába	295,085	298,972	594,057	9,082	8,476	17,558	15·29	14·27	29·56	107·15	..	5·64	18·13	17·21	35·33
6	City of Bombay ..	629,854	333,509	963,363	10,042	9,419	19,461	10·42	9·77	20·19	106·73	..	26·91	11·15	10·48	21·63
	Central Registration District.															
7	Ahmednagar	475,163	468,828	943,991	15,137	13,812	28,949	16·03	14·64	30·67	109·59	7·54	..	19·19	17·95	37·14
8	Poona	538,238	526,568	1,064,806	15,944	14,613	30,557	14·97	13·73	28·70	109·23	..	3·35	16·27	15·07	31·34
9	Sholápur	391,311	376,706	768,017	14,892	14,200	29,092	19·39	18·49	37·88	104·94	12·53	..	20·05	18·93	38·98
10	Sátára	538,841	541,957	1,080,798	17,622	16,808	34,430	16·30	15·55	31·85	104·84	1·67	..	18·94	17·97	36·91
11	Ratnágiri	553,368	650,234	1,203,602	16,677	15,365	32,042	12·86	12·76	26·62	108·54	1·71	..	15·83	14·44	30·27
	Southern Registration District.															
12	Belgaum	478,458	463,490	941,948	18,198	17,774	35,972	19·32	18·87	38·19	102·30	8·99	..	19·91	19·19	39·10
13	Dhárwár	519,995	505,091	1,025,086	18,122	17,422	35,544	17·68	16·99	34·67	104·02	1·66	..	19·10	18·60	37·70
14	Bijápur	433,866	429,061	862,927	15,720	14,899	30,619	18·22	17·26	35·48	105·51	8·01	..	18·42	17·74	36·16
15	Kánara	220,965	210,369	430,434	6,721	6,215	12,936	15·61	14·44	30·05	108·14	..	3·95	16·78	15·98	32·76
	Gujarát Registration District.															
16	Surat	326,839	327,135	653,974	12,710	11,761	24,471	19·44	17·98	37·42	108·07	2·83	..	19·66	18·65	38·31
17	Broach	158,219	148,448	306,667	6,490	6,278	12,768	21·16	20·47	41·63	103·38	11·39	..	22·89	21·43	44·32
18	Kaira	370,174	321,468	691,642	12,841	11,188	24,029	18·56	16·18	34·74	114·77	..	2·87	21·61	18·87	39·85
19	Panch Mahális ..	166,902	156,751	322,653	6,521	6,164	12,685	20·21	19·10	39·31	105·79	14·35	..	21·95	20·78	42·73
20	Ahmedabad	432,124	395,213	827,337	14,388	13,099	27,487	17·39	15·83	33·22	109·84	..	3·36	20·94	19·02	39·96
	Sind Registration District.															
21	Karáchi	290,390	225,943	516,333	6,152	5,267	11,419	11·91	10·21	22·12	116·80	2·71	...	12·19	10·62	22·81
22	Hyderabad	337,526	273,584	611,110	6,298	4,721	11,019	10·31	7·72	18·03	133·40	1·22	..	9·09	6·84	15·93
23	Thar and Párkar ..	241,274	192,091	433,365	3,083	3,193	7,176	9·19	7·36	16·55	124·74	4·09	...	10·07	7·87	17·94
24	Nawabshah	247,719	200,759	448,478	4,247	3,118	7,365	9·47	6·95	16·42	136·20	2·09	..	10·88	7·73	18·61
25	Lárkána	359,207	301,621	660,828	6,629	4,941	11,570	10·03	7·47	17·50	134·16	..	1·21	11·50	9·13	20·63
26	Sukkur	312,732	260,803	573,535	6,752	5,386	12,138	11·77	9·40	21·17	125·36	4·84	..	12·59	10·01	22·60
27	Upper Sind Frontier ..	145,541	117,415	262,956	2,828	2,226	5,054	10·75	5·46	19·21	127·00	6·50	..	12·66	9·85	22·51
	Total for the Presidency ..	10,188,455	9,398,928	19,587,383	309,463	283,712	593,175	15·80	14·48	30·28	109·08	1·63	.	17·49	16·17	33·66

ANNUAL FORM NO. II.—*Showing the* BIRTHS *and* DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1920.*

1	2	3	4	5			6		7			8
Number.	Districts.	Area in square miles.	Average population per square mile.	Population (Census 1911).			Births.		Number of Deaths registered.			Number of Deaths of males to every 100 Deaths of females.
				Male.	Female.	Total.	Total Number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.	
	Western Registration District.											
1	East Khándesh	4,550	227	521,546	512,668	1,034,214	43,207	41·77	15,476	14,183	29,659	109·12
2	West Khándesh	5,430	106	293,300	287,380	580,680	23,645	40·72	7,214	6,713	13,927	107·46
3	Násik	5,879	154	455,045	448,599	903,644	30,405	33·65	15,263	13,863	29,126	110·09
4	Thána	3,576	246	456,673	424,235	880,908	21,587	24·50	16,229	15,055	31,284	107·79
5	Kolába	2,169	274	295,085	298,972	594,057	17,558	29·56	10,601	10,306	20,907	102·85
6	City of Bombay	22·5	41,483	629,854	333,509	963,363	19,451	20·19	25,606	19,770	45,376	129·52
	Central Registration District.											
7	Ahmednagar...	6,613	142	475,163	468,828	943,991	28,949	30·67	11,577	10,263	21,840	112·80
8	Poona	5,366	198	538,238	526,568	1,064,806	30,557	28·70	18,115	16,015	34,130	113·11
9	Sholápur	4,556	169	391,311	376,706	768,017	29,092	37·88	10,313	9,126	19,439	113·03
10	Sátára	4,818	224	538,841	541,957	1,080,798	34,430	31·85	16,786	15,732	32,518	106·69
11	Ratnágiri	3,989	302	553,368	650,234	1,203,602	32,042	26·62	14,937	15,040	29,977	99·31
	Southern Registration District.											
12	Belgaum	4,613	204	478,458	463,490	941,948	35,072	38·19	13,931	13,571	27,502	102·67
13	Dhárwár	4,604	223	519,995	505,091	1,025,086	35,544	34·67	16,952	16,886	33,838	100·39
14	Bijápur	5,707	151	433,866	429,061	863,927	30,619	35·48	12,063	11,641	23,704	103·62
15	Kánara	3,946	109	220,065	210,369	430,434	12,936	30·05	7,529	7,106	14,635	105·95
	Gujarát Registration District.											
16	Surat	1,651	396	326,839	327,135	653,974	24,471	37·42	11,444	11,180	22,624	102·36
17	Broach	1,468	209	158,219	148,448	306,667	12,768	41·63	4,733	4,542	9,275	104·21
18	Kaira	1,596	433	370,174	321,468	691,642	24,020	34·74	13,953	12,057	26,010	115·72
19	Panch Mahális	1,606	201	165,902	156,751	322,653	12,685	39·31	4,116	3,937	8,053	104·55
20	Ahmedabad	3,824	216	432,124	395,213	827,337	27,487	33·22	15,987	14,279	30,266	111·96
	Sind Registration District.											
21	Karáchi	11,782	44	290,390	225,943	516,333	11,419	22·12	5,618	4,402	10,020	127·62
22	Hyderabad	4,417	138	337,526	273,584	611,110	11,019	18·03	5,799	4,477	10,276	129·53
23	Thar and Párkar	13,388	32	241,274	192,091	433,365	7,176	16·55	3,155	2,750	5,405	140·2
24	Nawabshah	3,567	116	217,719	200,759	418,478	7,365	16·42	3,480	2,746	6,426	134·06
25	Lárkána	5,053	131	359,207	301,621	660,828	11,570	17·50	6,906	5,464	12,370	126·39
26	Sukkur	1,606	201	312,732	260,803	573,535	12,138	21·17	5,195	4,169	9,364	124·61
27	Upper Sind Frontier ...	2,645	99	145,541	117,445	262,986	5,054	19·21	1,860	1,485	3,345	125·26
	Total for the Presidency ...	122,978	159	10,188,455	9,398,928	19,587,383	593,175	30·28	295,038	266,258	561,296	110·81

1	2	9										10		
Number.	Districts.	Deaths per 1,000 of Population from							All causes.			Mean Ratio of Deaths per 1,000 during previous five years.		
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	Male.	Female.	Total.	Male.	Female.	Total.
	Western Registration District.														
1	East Khándesh	·02	·03	3·14	12·08	1·05	4·30	·26	7·80	29·67	27·67	28·68	50·76	52·37	51·56
2	West Khándesh	·01	·03	2·20	10·57	·28	3·17	·32	7·40	24·60	23·36	23·98	54·36	56·20	55·27
3	Násik	·05	·04	·09	17·04	1·36	4·56	·30	8·19	33·54	30·91	32·23	55·01	57·10	56·06
4	Thána	·04	·06	·23	27·45	·68	2·00	·51	4·54	35·84	35·49	35·51	38·70	40·44	39·53
5	Kolába	...	·04	·33	23·69	1·04	2·65	·42	7·02	34·92	34·49	35·19	43·60	43·19	43·10
6	City of Bombay	·12	·30	·29	6·28	3·63	21·02	·90	14·56	40 65	59 28	47·10	37·44	55·07	43·75
	Central Registration District.														
7	Ahmednagar	·01	·01	...	10·15	1·86	4·50	·28	6·32	24·36	21·89	23·13	46·96	47·79	47·37
8	Poona	·18	·13	·04	14·84	2·42	6·30	·36	7·78	33·66	30·07	32·05	46·81	47·63	47·22
9	Sholápur	·08	·03	·01	12·18	1·68	2·50	·46	8·07	26·35	24·49	25·31	59·53	62 87	61·17
10	Sátára	1·90	·06	2·48	15·65	3·13	1·89	·44	5·47	31·15	29·03	30·09	49·94	51·97	50·96
11	Ratnágiri	·08	·05	...	11·24	·96	4·81	·45	7·32	26·99	23·13	24·91	32·21	29·44	30·18
	Southern Registration District.														
12	Belgaum	·17	·26	1·20	8·26	3·60	3·25	·50	11·95	29·12	29·28	29·20	44·43	45·97	45·19
13	Dhárwár	...	·17	4·01	10·99	1·44	3·45	·42	12·53	32·60	33·43	33·01	44·11	46·65	45·38
14	Bijápur	·24	·20	·19	12·00	2·79	2·85	·43	8·75	27·80	27·14	27·47	49·65	52·16	50·90
15	Kánara	...	1·44	·14	14·60	2·84	2·02	·50	12·47	34·21	33·78	34·00	36·44	37·07	36·75
	Gujarát Registration District.														
16	Surat	...	·05	...	12·12	1·35	11·64	·36	9·07	35·01	34·18	34·59	40·75	40·32	40·50
17	Broach	...	...	...	11·20	·99	9·82	·47	7·76	29·91	30·60	30·24	46·16	48·99	47·55
18	Kaira	...	·10	...	14·18	1·79	11·97	·50	9·27	37·69	37·51	37·61	41·22	43·70	42·37
19	Panch Mahális	...	...	...	13·65	·69	4·06	·41	6·15	24·81	25·12	24·96	31·35	32·31	31·81
20	Ahmedabad	...	·07	...	18·06	1·20	10·16	·47	6·62	37·00	36·13	36·58	46·32	49·36	47·79
	Sind Registration District.														
21	Karáchi	...	·55	·73	9·37	·21	2·52	·30	5·72	19·03	19·48	19·40	32·24	34·34	33·34
22	Hyderabad	...	·58	·01	13·07	·15	1·64	·20	1·17	17·18	16·22	16 83	32·85	34·53	33·60
23	Thar and Párkar	...	·18	...	11·00	·05	·65	·17	·42	13·08	11·72	12·48	36·20	37·94	36·98
24	Nawabshah	...	·49	...	12·81	·24	·40	·22	·38	14·86	13·67	14 33	35·88	37·80	36·73
25	Lárkána	...	·56	...	17·12	·02	·30	·18	·54	19·23	18 12	18·72	31·71	33·86	32·69
26	Sukkur	...	·17	·01	13 94	·11	·41	·16	1·52	16·64	15·99	6 32	36·73	41·12	38·72
27	Upper Sind Frontier ...	...	·15	...	12·09	·01	·13	·14	·22	12·77	12·65	12·73	32 92	37·15	34·80
	Total for the Presidency...	·10	·18	·71	13·58	1·53	4·93	·39	7·23	28·96	28·33	28·65	42 95	45·46	44·16

ANNUAL FORM No. III.—DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1920.*

1	2	3												4	5
No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total Deaths registered during the year.	No.
	Western Registration District.														
1	East Khándesh	2,464	2,766	3,493	3,090	2,427	1,537	1,545	2,546	2,846	2,270	2,203	2,482	29,659	1
2	West Khándesh	1,671	1,292	1,579	1,350	835	725	704	999	1,154	1,144	1,226	1,257	13,927	2
3	Násik	2,341	2,406	4,247	3,568	1,877	1,548	1,851	2,239	2,256	2,328	2,213	2,252	29,126	3
4	Thána	2,859	5,152	5,782	2,818	1,875	1,359	1,357	1,776	1,761	1,823	2,226	2,491	31,284	4
5	Kolába	2,107	3,538	3,251	1,707	1,238	963	1,124	1,283	1,209	1,307	1,493	1,687	20,907	5
6	City of Bombay	4,415	4,402	3,801	3,746	3,463	3,082	3,184	3,478	3,737	4,219	3,729	4,120	45,376	6
	Central Registration District.														
7	Ahmednagar	1,690	1,651	2,032	2,530	1,900	1,486	1,680	2,008	1,804	1,741	1,593	1,725	21,840	7
8	Poona	3,306	2,934	3,486	3,439	2,711	2,244	2,536	3,080	2,732	2,707	2,377	2,578	34,130	8
9	Sholápur	1,618	1,501	1,332	1,834	1,232	1,252	1,471	1,695	1,680	1,935	1,644	1,585	19,439	9
10	Sátára	2,299	2,227	2,511	2,512	2,420	2,355	3,349	4,001	3,385	3,022	2,383	2,054	32,518	10
11	Ratnágiri	2,980	4,160	3,832	2,388	2,092	1,828	2,057	2,010	1,954	2,071	2,041	2,564	29,977	11
	Southern Registration District.														
12	Belgaum	2,035	2,403	3,517	2,704	2,160	2,009	2,191	2,464	2,163	2,233	1,774	1,849	27,502	12
13	Dhárwár	3,613	3,368	4,168	2,641	2,171	2,020	2,241	2,739	2,716	2,877	2,541	2,743	33,338	13
14	Bijápur	1,914	2,105	2,592	2,128	1,936	1,749	1,800	1,993	1,815	2,261	1,800	1,611	23,704	14
15	Kánara	1,288	1,230	1,704	1,549	1,207	1,074	1,063	1,191	1,055	993	977	1,306	14,635	15
	Gujarát Registration District.														
16	Surat	1,842	2,901	3,655	1,850	1,462	1,527	1,664	1,665	1,452	1,472	1,533	1,601	22,634	16
17	Broach	728	962	811	767	801	720	815	891	739	696	621	694	9,275	17
18	Kaira	1,560	2,952	3,845	2,631	1,862	1,751	2,096	2,217	1,979	1,754	1,612	1,751	26,010	18
19	Panch Maháls	532	586	1,153	1,044	566	501	524	648	620	684	615	580	8,053	19
20	Ahmedabad...	2,651	2,953	3,767	3,064	2,115	1,754	1,980	2,331	2,316	2,215	2,284	2,836	30,266	20
	Sind Registration District.														
21	Karáchi	1,497	1,088	917	881	950	839	605	569	596	593	715	780	10,020	21
22	Hyderabad	1,736	1,090	1,170	1,059	924	691	584	445	550	640	646	741	10,276	22
23	Thar and Párkar	971	607	582	518	522	405	304	285	224	366	238	383	5,405	23
24	Nawabshah	905	634	686	757	783	526	419	297	270	328	395	426	6,426	24
25	Lárkána	1,842	1,308	1,161	1,483	1,537	956	741	548	547	674	772	801	12,370	25
26	Sukkur	1,091	847	882	995	1,096	699	643	469	552	597	684	809	9,264	26
27	Upper Sind Frontier ...	413	279	309	333	426	270	202	208	182	269	268	186	3,345	27
	Total for the Presidency...	52,356	57,412	66,325	53,386	43,088	35,870	38,760	44,066	42,284	43,224	40,803	43,892	561,296	
	Ratio of deaths per 1,000 in each month... ...	2·67	2·93	3·39	2·72	2·20	1·83	1·98	2·25	2·16	2·21	2·07	2·24	28·65	

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ANNUAL FORM NO. IV.—DEATHS *registered according to* AGE IN

1	2	3		4		5		6	
No.	Districts.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.								
1	East Khándesh	3,879	3,224	2,890	2,836	905	820	530	632
2	West Khándesh	1,756	1,410	1,197	1,190	527	463	286	322
3	Násik	2,945	2,506	2,352	2,202	917	938	591	569
4	Thána	1,853	1,534	2,090	2,039	971	1,091	606	635
5	Kolába	1,569	1,282	1,469	1,549	677	670	308	342
6	City of Bombay	5,760	5,047	2,718	2,913	777	855	706	728
	Central Registration District.								
7	Ahmednagar	2,740	2,198	1,843	1,679	456	442	290	311
8	Poona	3,536	2,722	2,329	2,599	843	867	464	464
9	Sholápur	2,962	2,338	1,873	1,715	518	461	251	267
10	Sátára	3,193	2,583	3,161	3,142	1,193	1,190	712	723
11	Ratnágiri	1,433	1,204	1,942	1,945	772	791	410	418
	Southern Registration District.								
12	Belgaum	2,731	2,153	2,952	3,037	1,048	1,123	501	532
13	Dhárwár	3,116	2,557	2,991	3,150	1,332	1,426	878	901
14	Bijápur	2,517	1,985	2,352	2,507	1,016	1,007	408	405
15	Kánara	1,487	1,243	824	899	286	319	189	173
	Gujarat Registration District.								
16	Surat	2,503	2,263	1,948	1,943	567	635	287	333
17	Broach	1,450	1,326	1,056	970	219	214	109	102
18	Kaira	2,723	2,583	3,174	2,744	598	464	336	308
19	Panch Mahals	849	776	822	825	277	260	109	104
20	Ahmedabad	3,621	3,225	2,877	2,804	626	571	422	357
	Sind Registration District.								
21	Karáchi	1,477	1,185	745	697	339	306	239	170
22	Hyderabad	1,190	1,017	625	584	399	395	275	203
23	Thar and Parkar	418	370	196	189	169	137	140	98
24	Nawabshah	676	529	395	354	325	249	207	133
25	Lárkána	1,095	878	916	737	739	669	418	280
26	Sukkur	1,363	994	633	591	323	294	175	145
27	Upper Sind Frontier	394	308	253	221	178	143	102	56
	Total for the Presidency	59,236	49,440	47,123	46,061	16,997	16,800	9,949	9,711
	Population according to Census of 1911	3,33,992	3,33,705	1,033,360	1,066,128	1,286,872	1,204,044	1,129,222	893,170
	Ratios per 1,000 living ...	177·36	148·16	45·60	43·20	13·21	13·95	8·81	10·87

THE DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1920.*

7		8		9		10		11		12		13
15 and under 20.		20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
385	532	1,082	1,278	1,201	1,096	1,186	771	1,053	740	2,365	2,254	1
191	276	481	675	710	608	565	418	537	405	964	946	2
483	572	1,353	1,551	1,746	1,584	1,503	1,025	1,335	907	2,038	2,059	3
554	679	1,961	2,313	2,443	2,260	2,192	1,413	1,607	1,141	1,952	1,950	4
332	398	964	1,224	1,175	1,194	1,276	891	1,205	901	1,626	1,855	5
1,537	1,344	4,848	3,099	3,325	1,702	2,115	1,087	1,832	1,191	1,988	1,804	6
343	520	989	1,119	990	820	1,108	689	1,303	1,062	1,515	1,423	7
409	522	1,547	1,814	1,946	1,733	1,695	1,170	1,633	1,055	3,213	3,069	8
188	220	639	714	691	649	624	484	677	534	1,890	1,744	9
430	514	1,274	1,366	1,449	1,282	1,270	945	1,173	920	2,931	3,067	10
422	449	1,545	1,704	1,473	1,622	1,462	1,311	1,629	1,285	3,849	4,311	11
351	379	1,092	1,275	1,056	1,134	1,009	737	984	702	2,207	2,499	12
459	576	1,492	2,042	1,556	1,576	1,329	1,086	1,352	1,099	2,447	2,473	13
227	308	861	1,124	852	958	805	606	1,034	746	1,991	1,995	14
228	285	820	966	1,036	816	916	600	672	547	1,071	1,258	15
288	363	940	1,343	1,033	1,212	973	794	1,035	594	1,870	1,709	16
74	105	238	346	287	325	310	264	406	277	584	613	17
302	241	1,175	970	1,264	1,129	1,214	953	1,179	800	1,988	1,865	18
93	91	347	332	392	425	356	280	361	245	510	599	19
485	455	1,651	1,496	1,624	1,285	1,562	1,111	1,478	1,178	1,641	1,797	20
213	205	691	601	585	435	433	229	369	186	522	388	21
305	230	824	720	698	448	561	325	405	221	517	334	22
133	105	480	331	481	357	409	217	342	182	387	264	23
199	192	499	447	462	318	382	215	264	132	271	177	24
395	321	877	915	835	608	578	388	494	282	559	386	25
225	254	517	552	510	418	490	294	419	239	540	388	26
98	75	204	204	170	174	145	104	124	70	192	130	27
9,349	10,211	29,391	30,521	29,990	26,118	26,473	18,407	24,902	17,641	41,628	41,348	
852,854	752,848	1,903,139	1,801,211	1,562,195	1,370,275	1,064,455	949,249	611,654	564,582	436,814	476,708	
10·96	13·56	15·44	16·94	19·20	19·06	24·87	19·39	40·71	31·24	95·30	86·40	

ANNUAL FORM NO. IV (*a*).—*Showing the details of* DEATHS *under one year*

1	2			
				Under
		Male.		
No.	Districts.	Under one week.	Over one week.	Total.
		1	2	3
	Western Registration District.			
1	East Khándesh	894	624	1,518
2	West Khándesh	392	311	703
3	Násik	734	487	1,221
4	Thána	528	211	739
5	Kolába	552	279	831
6	City of Bombay	1,182	796	1,978
	Central Registration District.			
7	Ahmednagar	871	312	1,183
8	Poona	752	539	1,291
9	Sholápur	836	464	1,300
10	Sátára	719	414	1,133
11	Ratnágiri	403	311	714
	Southern Registration District.			
12	Belgaum	643	510	1,153
13	Dhárwár	687	581	1,268
14	Bijápur	490	494	984
15	Kánara	556	291	847
	Gujarát Registration District.			
16	Surat	657	447	1,104
17	Broach	303	265	568
18	Kaira	372	359	731
19	Panch Mahals	148	178	326
20	Ahmedabad	471	552	1,023
	Sind Registration District.			
21	Karáchi	291	223	514
22	Hyderabad	283	227	510
23	Thar and Párkar	139	76	215
24	Nawabshah	179	162	341
25	Lárkána	266	209	475
26	Sukkur	285	253	538
27	Upper Sind Frontier	94	64	158
	Total for the Presidency ...	13,727	9,639	23,366

IN THE DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1920.*

DEATHS UNDER ONE YEAR													
One month.				Between one to six months.			Between six to twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
Female.			Total of columns 3 and 6.										
Under one week.	Over one week.	Total.		Male.	Female.	Total.	Male.	Female.	Total.				
4	5	6	7	8	9	10	11	12	13	14	15	16	17
732	555	1,287	2,805	1,295	1,074	2,369	1,066	863	1,929	3,879	3,224	7,103	1
335	236	571	1,274	641	526	1,167	412	313	725	1,756	1,410	3,166	2
593	423	1,016	2,237	1,111	941	2,052	613	549	1,162	2,945	2,506	5,451	3
454	200	654	1,393	815	632	1,447	299	248	547	1,853	1,534	3,387	4
410	202	612	1,448	497	455	952	241	215	456	1,569	1,282	2,851	5
884	675	1,559	3,537	1,713	1,481	3,194	2,069	2,007	4,076	5,760	5,047	10,807	6
694	280	974	2,157	986	827	1,813	571	397	968	2,740	2,198	4,938	7
568	422	990	2,281	1,181	896	2,077	1,064	836	1,900	3,536	2,722	6,258	8
630	424	1,054	2,354	901	698	1,599	761	586	1,347	2,962	2,338	5,300	9
573	373	946	2,079	1,305	1,095	2,400	755	542	1,297	3,193	2,583	6,776	10
310	222	532	1,246	414	389	803	305	283	588	1,433	1,204	2,637	11
485	444	929	2,082	996	791	1,787	582	433	1,015	2,731	2,153	4,884	12
557	479	1,036	2,304	1,212	1,041	2,253	636	480	1,116	3,116	2,557	5,673	13
378	400	778	1,762	1,090	844	1,934	443	363	806	2,517	1,985	4,502	14
457	217	674	1,521	448	399	847	192	170	362	1,487	1,243	2,730	15
573	396	969	2,073	822	787	1,609	577	507	1,084	2,503	2,263	4,766	16
271	238	509	1,077	475	414	889	407	403	810	1,450	1,326	2,776	17
389	390	779	1,510	996	951	1,947	996	853	1,849	2,723	2,583	5,306	18
139	148	287	613	299	279	578	224	210	434	849	776	1,625	19
382	520	902	1,925	1,339	1,143	2,482	1,259	1,180	2,439	3,621	3,225	6,846	20
217	173	390	904	450	355	805	513	440	953	1,477	1,185	2,662	21
223	188	411	921	236	234	470	444	372	816	1,150	1,017	2,207	22
125	53	178	393	94	85	179	109	107	216	418	370	788	23
148	95	243	584	130	114	244	205	172	377	676	529	1,205	24
217	125	342	817	245	219	464	375	317	692	1,095	878	1,973	25
218	198	416	954	390	257	647	435	321	756	1,363	994	2,357	26
68	49	117	275	79	65	144	157	126	283	394	308	702	27
11,030	8,125	19,155	42,521	20,160	16,992	37,152	15,710	13,293	29,003	59,236	49,440	108,676	

ANNUAL FORM No. V.—DEATHS *registered according to* CLASSES *and by*

1	2	3							
		POPULATION ACCORDING TO CENSUS							
No.	Districts.	Mahomedans.		Hindus.		Jains.		Christians.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.								
1	East Khandesh	56,613	48,908	454,035	448,096	5,106	4,255	427	321
2	West Khandesh	16,517	14,806	239,190	235,010	2,142	1,654	295	291
3	Nasik	24,708	22,997	423,799	419,906	4,303	3,599	938	929
4	Thana	23,245	18,734	406,162	380,763	2,071	914	22,391	20,950
5	Kolaba	14,127	14,749	278,123	282,143	1,089	322	623	526
6	City of Bombay	118,984	60,352	436,521	227,521	15,395	5,065	28,149	13,124
	Central Registration District.								
7	Ahmednagar	24,746	23,213	429,535	426,141	8,024	7,260	12,085	11,537
8	Poona	26,589	22,347	498,914	492,824	6,706	5,025	3,746	4,484
9	Sholapur	28,573	26,804	357,775	345,440	4,041	3,602	720	692
10	Satara	18,729	17,959	511,674	516,502	7,845	7,038	455	360
11	Ratnagiri	36,166	49,137	553,353	597,241	975	938	2,813	2,865
	Southern Registration District.								
12	Belgaum	39,232	37,843	414,733	403,064	21,739	19,794	2,625	2,688
13	Dharwar	69,887	67,056	442,038	430,847	5,482	4,931	2,409	2,117
14	Bijapur	50,799	50,270	380,778	376,764	1,757	1,478	516	536
15	Kanara	14,058	14,673	196,785	186,839	721	530	8,447	8,282
	Gujrat Registration District.								
16	Surat	27,170	23,224	286,386	285,448	5,248	4,573	605	445
17	Broach	34,869	32,883	100,050	92,914	1,645	1,408	698	354
18	Kaira	33,388	29,892	320,956	277,209	3,309	3,300	12,463	1,1027
19	Panch Mahals	11,679	10,594	141,060	133,279	795	747	883	927
20	Ahmedabad	47,848	44,170	362,755	330,454	18,132	17,767	2,000	1,584
	Sind Registration District.								
21	Karachi	218,951	177,383	66,477	45,271	497	213	2,403	1,222
22	Hyderabad								
23	Thar and Parkar	574,408	461,029	243,868	198,933	367	328	161	87
24	Nawabshah								
25	Larkana	303,305	254,212	54,994	46,693	.....	1	16	5
26	Sukkur	226,817	187,854	83,731	71,425	2	1	134	73
27	Upper Sind Frontier	129,870	106.100	15,296	11,199	.....	.....	9	1
	Total of the Presidency ...	2,165,278	1,822,199	7,658,988	7,261,926	117,331	94,743	1,06,011	85,427

N. B.—This and all the other Statements refer to Natives only and not to Europeans. "Hindus" include

OF 1911.

Parsis.		Other Classes.		Total.		Total.	Mahomedans.		Hindus.	
Male.	Female.	Male.	Female.	Male.	Female.		Male.	Female.	Male.	Female.
211	160	11,154	10,928	521,546	512,668	1,034,214	1,223	1,144	14,241	13,028
163	70	34,993	35,549	293,300	287,380	580,680	243	241	6,960	6,467
459	381	838	787	455,045	448,599	903,644	547	510	14,692	13,329
2,488	2,617	316	257	456,673	424,235	880,908	590	499	14,967	13,946
163	140	960	1,092	295,085	298,972	594,057	378	423	10,168	9,844
26,764	24,167	4,041	3,270	629,854	333,509	963,363	5,333	3,857	17,670	13,717
112	110	661	567	475,163	468,828	943,991	544	469	10,979	9,745
1,394	1,361	889	587	538,238	526,568	1,064,806	696	636	17,326	15,294
181	153	21	15	391,311	376,706	768,017	671	632	9,591	8,447
122	87	16	11	538,841	541,957	1,080,798	427	416	16,243	15,201
33	13	28	40	553,368	650,234	1,203,602	938	817	13,938	14,153
93	66	36	35	478,458	463,490	941,948	971	970	12,370	12,059
122	96	57	44	519,995	505,091	1,025,086	2,055	2,022	14,644	14,617
16	12	...	1	433,866	429,061	862,927	1,204	1,206	10,826	10,388
9	5	45	40	220,065	210,369	430,434	384	353	6,913	6,513
5,364	6,419	2,066	2,026	326,839	327,135	653,974	730	773	8,941	8,520
1,229	1,541	19,728	19,348	158,219	148,448	306,667	1,002	1,020	3,191	2,943
49	32	9	8	370,174	321,468	691,642	1,124	983	12,651	10,930
115	89	11,370	11,115	165,902	156,751	322,653	219	210	3,037	2,817
856	783	533	455	432,124	395,213	827,337	1,663	1,579	13,908	12,281
1,146	1,056	976	798	290,390	225,943	516,333	3,536	2,627	1,999	1,706
				337,526	273,584	611,110	3,893	2,914	1,902	1,561
52	43	7,656	6,014	241,274	192,091	433,365	1,692	1,217	1,445	1,024
				247,719	200,759	448,478	2,665	1,893	1,008	848
5	1	887	709	359,207	301,621	660,828	5,633	4,347	1,265	1,114
46	50	2,002	1,400	312,732	260,803	573,535	3,155	2,422	2,027	1,726
3	2	363	143	145,541	117,445	262,986	1,558	1,233	301	252
41,202	39,394	99,645	95,239	10,188,455	9,398,928	19,587,383	43,074	35,413	243,103	222,470

NUMBER OF DEATHS REGISTERED.

Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1	...	7	11	2	...	2	...	15,476	14,183	29,659
3	...	7	5	1	...	...	...	7,214	6,713	13,927
5	5	11	13	5	5	3	1	15,263	13,863	29,126
10	6	611	562	40	36	11	6	16,229	15,055	31,284
2	2	27	25	...	...	26	12	10,601	10,306	20,907
748	559	1,044	815	744	689	167	133	25,606	19,770	45,376
18	10	36	39	...	...	...	...	11,577	10,263	21,840
13	5	54	60	16	12	10	8	18,115	16,015	34,130
47	42	...	...	...	...	4	5	10,313	9,126	19,439
111	104	4	7	...	2	1	2	16,786	15,732	32,518
5	3	55	67	1	...	...	...	14,937	15,040	29,977
527	493	60	48	1	...	2	2	13,931	13,571	27,502
198	199	55	48	...	...	...	...	16,952	16,886	33,838
23	33	10	14	...	...	...	...	12,063	11,641	23,704
17	18	214	222	...	...	1	...	7,529	7,106	14,635
86	72	24	32	115	166	1,548	1,617	11,444	11,180	22,624
29	26	4	11	24	27	483	515	4,733	4,542	9,275
48	42	118	85	3	2	9	15	13,953	12,057	26,010
13	9	28	19	...	...	819	882	4,116	3,937	8,053
343	365	45	34	19	11	9	9	15,987	14,279	30,266
...	...	59	46	19	17	5	6	5,618	4,402	10,020
...	...	3	1	...	...	1	1	5,799	4,477	10,276
1	...	...	...	...	...	17	9	3,155	2,250	5,405
...	...	...	...	...	...	7	5	3,680	2,746	6,426
...	...	...	...	...	...	8	3	6,906	5,464	12,370
...	...	...	5	1	4	12	12	5,195	4,169	9,364
...	...	...	...	...	...	1	...	1,860	1,485	3,345
2,248	1,992	2,476	2,169	991	971	3,146	3,243	295,038	2,66,258	561,296

SEX, *in the Districts of the* BOMBAY PRESIDENCY *during the year 1920.*

5

RATIO OF DEATHS PER 1,000 OF POPULATION.

Mahomedans.		Hindus.		Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
24·16	23·39	31·37	29·07	1·20	...	16·39	34·27	9·48	...	·18	...	29·67	27·67	28·68
14·71	16·28	29·10	27·52	1·40	...	23·76	17·18	6·13	...	...	...	24·60	23·36	23·98
22·14	22·18	34·69	31·74	1·16	1·39	11·73	13·99	10·89	13·12	3·58	1·27	33·54	30·91	32·23
25·38	26·63	36·85	36·63	4·83	6·56	27·29	26·82	16·08	13·75	34·81	23·34	35·54	35·49	35·51
26·76	26·68	36·56	34·89	1·83	6·21	43·34	47·53	...	...	27·09	10·99	34·92	34·49	35·19
44·82	63·90	40·25	60·29	48·59	110·36	37·09	62·10	27·79	28·51	41·32	40·67	40·65	59·28	47·10
21·98	20·20	25·56	22·87	2·24	1·38	2·98	3·38	...	...	...	...	24·36	21·89	23·23
26·18	28·46	34·73	31·03	1·94	1·00	14·12	15·38	11·48	9·22	11·25	13·63	33·66	30·07	32·05
23·48	23·57	26·80	24·74	11·63	11·93	...	...	...	...	190·47	333·33	26·35	24·49	25·31
22·80	23·16	31·74	29·43	14·15	14·78	8·79	19·44	...	22·99	62·50	181·81	31·15	29·03	30·09
25·93	16·63	27·15	23·69	5·13	3·19	19·55	23·39	30·30	...	...	...	26·99	23·13	24·91
24·74	25·63	29·83	29·92	24·24	24·86	22·86	17·86	10·75	...	55·56	57·14	29·12	29·28	29·20
29·40	30·15	33·13	33·92	36·12	40·36	22·83	22·67	...	...	...	...	32·60	33·43	33·01
23·70	23·99	28·43	27·57	13 00	22·33	19·38	26·12	...	...	...	...	27·80	27·14	27·47
27·32	24·05	35·13	34·85	23·59	33·96	25·33	26·81	...	...	22·22	...	34·21	33·78	34·00
26·87	27·39	31·22	29·85	16·38	15·74	35·61	62·62	21·44	25·86	749·27	798·12	35·01	34·18	34·59
28·73	31·02	31·89	31·68	17·63	18·47	5·52	29·19	19·53	17·52	24.48	26·62	29·91	30·60	30·24
33·66	32·89	39·42	39·43	14·51	12·73	9·43	7·67	61·22	62·50	1000·00	1875·00	37·69	37·51	37·61
18·75	19·82	21·53	21·14	16·35	12·05	30·77	20·16	...	...	72·03	79·35	24·81	25·12	24·96
34·75	35·75	38·34	37·17	18·81	20·54	19·89	18·95	23·20	14·05	16·90	19·77	37·00	36·13	36·58
16·15	14·81	30·07	37·68	...	...	24·55	37·64	16·58	16·10	5·12	7·52	19·03	19·48	19·40
												17·18	16·22	16·68
14·36	13·06	17·86	17·26	2·72	...	18·63	11·49	...	...	3·26	2·49	13·08	11·72	12·48
												14·86	13·67	14·33
18·57	17·10	23·00	23·86	...	...	...	...	...	...	9·02	4·23	19·23	18·12	18·72
13·91	12.89	24·21	24·16	...	...	...	68·49	21·74	80·00	5·99	8·57	16·64	15·99	16·32
12·00	11·62	19·68	22·50	...	...	...	...	...	...	2·75	...	12·77	12·65	12·73
19·89	19·43	31·74	30·63	19·16	21·02	23·36	25·39	24·05	24·65	31·57	34·05	28·96	28·33	28·65

Hindus of all castes. "Other Classes" include Buddhists, Sikhs, Jews and all others.

ANNUAL FORM No. VI.—DEATHS *registered from different causes in the* Details regarding Births

1	2	3	4				5	6	7	8	9	10	11	
			Births.										INJU-	
No.	Districts and Towns.	Population according to Census of 1911.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female
	A.—DISTRICTS.													
	Western Registration District.													
1	East Khándesh ...	903,053	20,322	19,004	39,326	43·55	20	29	2,324	11,172	952	3,859	3	7
2	West Khándesh ...	538,084	11,507	10,831	22,338	41·43	1	18	1,279	5,883	130	1,548	6	8
3	Násik ...	813,511	14,340	13,407	27,747	34·11	15	24	71	14,702	919	3,444	5	9
4	Thána ...	791,861	10,119	9,534	19,653	24·82	28	42	105	22,953	408	1,159	26	14
5	Kolába ...	567,043	8,837	8,270	17,107	30·16	3	22	159	13,671	591	1,514	3	1
	Central Registration District.													
6	Ahmednagar ...	888,096	14,467	13,285	27,752	31·21	5	7	1	9,271	1,646	3,554	5	4
7	Poona ...	859,267	13,970	12,938	26,908	31·32	151	29	18	13,553	1,942	3,752	3	5
8	Sholápur ...	660,338	12,512	11,970	24,482	37·07	60	8	2	6,047	1,212	1,416	5	2
9	Sátára ...	1,025,700	17,046	16,277	33,323	32·49	1058	55	2,546	16,283	3,212	1,865	22	7
10	Ratnágiri ...	1,136,710	15,719	14,502	30,221	26·58	79	57	2	12,855	1,075	5,452	8	8
	Southern Registration District.													
11	Belgáum ...	869,243	17,193	16,794	33,987	39·10	128	239	1,001	7,230	3,260	2,743	14	17
12	Dhárwár ...	885,871	15,607	15,091	30,698	34·65	2	167	3,706	10,135	1,193	2,607	21	35
13	Bijápur ...	792,582	14,468	13,741	28,209	35·59	210	161	161	9,745	2,310	2,105	26	17
14	Kánara ...	382,278	6,067	5,593	11,660	30·50	...	565	61	5,961	1,106	755	11	2
	Gujarat Registration District.													
15	Surat ...	512,580	10,634	9,988	20,622	40·23	1	21	...	7,038	588	5,757	7	10
16	Broach ...	242,979	5,292	5,058	10,350	42·60	...	...	...	2,977	266	2,147	2	4
17	Káira ...	594,309	10,887	9,457	20,344	34·23	1	13	1	8,128	931	7,121	12	12
18	Panch Mahális ...	291,248	6,040	5,735	11,775	40·43	...	...	...	3,870	214	1,285	7	8
19	Ahmedabad ...	568,530	9,052	8,204	17,256	30·35	...	32	1	11,548	458	3,168	7	6
	Sind Registration District.													
20	Karáchi ...	351,401	2,201	1,587	3,788	10·80	...	185	55	3,172	11	182	2	...
21	Hyderabad ...	523,747	4,789	3,516	8,305	15·86	...	135	...	7,209	18	256	3	...
22	Thar and Párkar ...	424,563	3,929	3,146	7,075	16·66	...	69	...	4,630	20	252	...	1
23	Nawábsháh ...	436,579	4,052	2,970	7,022	16·08	...	214	...	5,529	20	146	5	2
24	Larkana ...	628,336	6,142	4,504	10,646	16·95	...	366	...	10,666	10	98	1	5
25	Sukkur ...	468,207	4,999	4,023	9,022	19·26	...	79	...	6,139	12	62	1	...
26	Upper Sind Frontier ...	251,245	2,706	2,134	4,840	19·23	...	40	...	3,024	2	26	1	3
	Total of Districts ...	16,407,762	262,534	241,254	503,788	30·70	1,762	2,577	11,493	233,441	22,506	56,273	206	178
	B.—TOWNS.													
	East Khándesh District,													
1	Jalgaon ...	17,195	290	253	543	31·57	...	...	4	156	23	76	...	...
2	Bhusáwal ...	18,312	260	246	506	27·63	3	...	1	307	14	78	...	...
3	Chopda ...	17,008	219	213	432	25·40	...	...	2	156	5	61	...	...
4	Dharangaon ...	15,607	224	177	401	25·69	...	...	296	94	18	35	...	1
5	Párola ...	14,177	251	206	457	32·23	...	...	101	157	15	65	...	...
6	Amalner ...	13,232	166	127	293	22·14	...	...	262	88	8	69	...	...
7	Erandol ...	13,144	243	198	441	33·55	...	...	181	114	8	62	...	...
8	Nasirabad ...	13,033	258	271	529	40·58	...	...	...	132	43	90	...	1
9	Chálisgaon ...	9,453	151	128	279	29·51	...	...	72	121	3	51	...	...
	West Khandesh District.													
10	Dhulia ...	30,757	476	425	901	29·29	...	...	...	164	33	222	1	...
11	Nandurbár ...	11,839	223	183	406	34·29	...	...	...	90	4	73	...	...

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1920.*
also shown, column 4.

DIES.				12	13	14 RATIO OF DEATHS PER 1,000 OF POPULATION.										15
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-Pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.	No.
173	20	10	218	7,147	25,721	·02	·03	2·57	12·37	1·05	4·28	·24	7·92	28·48	53·04	1
121	41	3	174	3,997	13,030	·01	·03	2·37	10·93	·24	2·88	·32	7·43	24·21	56·07	2
169	43	7	233	6,543	25,951	·02	·03	·09	18·07	1·13	4·23	·28	8·04	31·89	56·35	3
232	116	...	388	3,277	28,360	·04	·05	·13	28·98	·52	1·46	·49	4·14	35·81	40·18	4
175	57	3	239	4,007	20,206	·01	·03	·28	24·11	1·04	2·67	·42	7·07	35·63	43·79	5
209	23	3	244	5,547	20,275	·01	·01	·00	10·44	1·85	4·01	·27	6·24	22·83	47·51	6
251	64	4	328	6,543	26,316	·18	·03	·02	15·76	2·26	4·37	·38	7·62	30·62	47·09	7
219	37	9	272	4,855	13,872	·09	·01	·00	9·16	1·84	2·14	·41	7·36	21·01	58·15	8
277	92	13	411	5,628	31,058	1·03	·05	2·50	15·87	3·13	1·82	·40	5·48	30·28	51·58	9
219	284	...	519	8,219	28,258	·07	·05	0	11·30	·95	4·80	·46	7·23	24·86	30·91	10
351	33	11	426	10,533	25,560	·15	·27	1·15	8·32	3·75	3·16	·49	12·12	29·40	46·02	11
267	31	6	360	11,239	29,409	·00	·19	4·18	11·44	1·35	2·94	·41	12·69	33·20	45·49	12
255	33	6	337	6,599	21,628	·26	·20	·20	12·30	2·91	2·66	·43	8·33	27·29	51·64	13
175	10	...	198	4,936	13,582	...	1·48	·16	15·59	2·89	1·98	·52	12·91	35·53	38·12	14
130	37	5	189	4,486	18,130	·00	·04	...	13·82	1·15	11·23	·37	8·75	35·37	41·01	15
81	10	8	105	1,796	7,291	...	...	...	12·25	1·10	8·84	·43	7·39	30·01	48·75	16
182	61	23	290	5,270	21,755	·00	·02	·00	13·68	1·57	11·98	·49	8·87	36·61	41·24	17
85	18	7	120	1,779	7,268	...	...	...	13·29	·73	4·41	·41	6·11	24·95	31·34	18
139	53	19	224	2,468	17,899	...	·06	·00	20·32	·81	5·55	·40	4·34	31·48	43·29	19
29	24	...	55	207	3,867	...	·53	·16	9·03	·03	·52	·16	·58	11·00	25·18	20
43	32	1	79	195	7,892	...	·26	...	13·76	·04	·49	·15	·37	15·07	32·16	21
29	43	...	73	174	5,218	...	·16	...	10·91	·05	·59	·17	·41	12·29	36·49	22
56	30	1	94	167	6,170	...	·49	...	12·67	·05	·33	·21	·38	14·13	37·18	23
74	33	...	113	215	11,468	...	·58	...	16·98	·02	·16	·18	·34	18·25	32·05	24
46	11	...	58	141	6,491	...	·17	...	13·12	·02	·13	·12	·30	13·87	36·31	25
29	8	1	37	34	3,163	...	·15	...	11·50	·01	·10	·14	·13	12·03	34·70	26
4,021	1,239	140	5,784	106,002	439,338	·11	·16	·70	14·23	1·37	3·43	·35	6·46	26·81	43·85	
3	...	...	3	188	450	...	...	·23	9·07	1·34	4·42	·18	10·93	26·17	44·83	1
9	...	1	10	146	559	·16	...	·05	16·76	·76	4·26	·55	7·97	30·53	40·79	2
5	1	...	6	91	321	...	...	·12	9·17	·29	3·59	·35	5·35	18·87	39·45	3
6	...	...	7	94	544	...	...	18·97	6·01	1·15	2·24	·45	6·02	34·84	37·35	4
3	1	2	6	77	421	...	...	7·12	11·07	1·05	4·58	·43	5·44	29·69	33·37	5
1	...	...	1	55	478	...	...	19·80	6·65	·22	5·21	·07	4·15	36·11	41·02	6
4	...	2	6	103	474	...	...	13·77	8·67	·60	4·72	·46	7·84	36·06	45·72	7
3	...	...	4	102	371	...	...	...	10·13	3·30	6·91	·30	7·33	28·47	52·09	8
2	...	1	3	70	320	...	...	7·62	12·80	·32	5·39	·32	7·40	33·85	36·81	9
4	0	3	8	200	627	...	...	...	5·33	1·07	7·22	·26	6·50	20·38	42·17	10
1	3	...	4	99	270	...	...	...	7·60	·34	6·17	·33	8·37	22·81	52·53	11

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Inju	
No.	Districts and Towns.	Population according to Census of 1911.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	B.—Towns—*contd.*													
	Nasik District.													
12	Násik ...	33,163	547	508	1,055	31·81	9	2	...	453	234	382	1	2
13	Yeola ...	16,275	261	178	439	26·97	...	...	...	271	32	76	...	...
14	Málegaon ...	19,542	381	326	707	36·17	...	1	1	276	19	86	...	...
15	Igatpuri ...	8,380	88	143	231	27·56	...	3	...	99	5	28	...	...
16	Manmád ...	6,947	62	42	104	14·97	20	1	...	73	5	22	...	...
17	Trimbak ...	4,078	53	35	88	21·57	6	1	...	65	14	25	...	...
18	Deoláli Cantonment ...	1,748	14	20	34	19·45	...	...	...	4	4	53	...	...
	Thana District.													
19	Thána ...	15,591	230	185	415	26·62	...	2	...	273	47	170	2	2
20	Bándra ...	22,885	250	226	476	20·80	8	2	63	133	51	183	1	...
21	Kurla ...	15,081	143	111	254	16·84	...	...	...	355	26	25	...	...
22	Bhiwandi ...	13,292	134	126	260	19·56	...	...	6	136	56	99	...	...
23	Kalyán ...	12,600	156	163	319	25·32	...	5	25	183	6	107	...	...
24	Bassein ...	9,598	99	111	210	21·88	...	...	4	147	4	22	...	...
	Kolaba District.													
25	Alibág ...	3,358	46	43	89	26·50	...	...	...	73	4	22	...	...
26	Panwel ...	7,744	77	71	148	19·11	...	...	...	176	4	15	...	...
27	Mahád ...	7,164	71	63	134	18·70	...	...	...	89	3	18	...	...
28	Uran ...	8,748	51	29	80	9·14	...	1	39	70	7	5	...	...
29	City of Bombay ...	963,383	10,042	9,409	19,451	20·19	119	290	281	6,046	3,501	20,248	42	12
	Ahmednagar District.													
30	Ahmednagar ...	33,878	338	256	594	17·54	...	...	...	89	77	555	2	...
31	Sangamner ...	14,269	198	138	336	23·54	...	...	...	157	17	51	...	...
32	Ahmednagar Cantonment, ...	7,748	134	133	267	34·46	...	...	...	73	19	89	...	1
	Poona District.													
33	Poona ...	126,201	1,372	1,175	2,547	20·18	12	100	32	1,605	490	2,500	...	...
34	Bárámati ...	10,190	180	142	322	31·60	28	...	...	72	45	65	...	...
35	Khed ...	8,056	97	81	178	22·09	...	...	...	51	3	19	...	...
36	Lonávala ...	12,295	95	96	191	15·53	...	2	...	196	15	51	...	...
37	Junnár ...	8,800	96	85	181	20·52	...	...	...	101	4	36	...	...
38	Poona Cantonment ...	30,958	53	39	92	2·97	...	3	...	209	45	165	...	...
39	Kirkee do. ...	9,019	81	57	138	15·30	...	...	...	12	28	126	...	...
	Sholapur District.													
40	Sholápur ...	61,032	1,707	1,569	3,276	53 68	2	13	4	2,101	108	364	...	...
41	Bársi ...	18,097	354	368	722	39·89	...	1	...	505	28	25	...	1
42	Pandharpur ...	28,550	319	293	612	21·43	...	...	...	694	169	118	...	1
	Satara District.													
43	Sátára ...	18,665	206	158	364	19·50	5	5	1	300	62	97	...	...
44	Wái ...	7,280	112	97	209	28·70	20	...	1	105	25	29	...	...
45	Karád ...	11,228	76	53	129	11·49	...	...	...	68	20	9	1	...
46	Ashta ...	9,351	94	136	230	24·59	...	...	...	97	24	3	2	...
47	Islámpur ...	8,571	88	87	175	20·41	...	...	130	66	40	39	...	...
	Ratnagiri District.													
48	Ratnágiri ...	15,822	202	205	407	25·72	...	7	...	141	17	57	...	...
49	Vengurla ...	17,294	313	283	596	34·46	1	...	...	186	17	108	1	...
50	Málwan ...	22,080	287	252	539	24·41	14	...	...	235	33	93	...	...
51	Chiplun ...	11,696	156	123	279	23·85	2	...	...	116	13	67	...	...

No. VI—*continued.*

RIES.				12	13	14 RATIO OF DEATHS PER 1,000 OF POPULATION.										15
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes, For the year.	From all causes, Mean of previous five years.	No.
20	...	1	24	543	1,647	·27	·06	...	13·66	7·06	11·52	·72	16·37	49·66	50·87	12
4	1	...	5	48	432	...	...	...	16·65	1·97	4·67	·31	2·94	26·54	52·78	13
3	...	...	3	131	517	...	·05	·05	14·12	·97	4·40	·16	6·70	26·45	76·14	14
2	...	...	2	28	165	...	·36	...	11·81	·59	3·34	·24	3·34	19·68	25·42	15
6	...	...	6	32	159	2·88	·14	...	10·51	·72	3·17	·86	4·60	22·88	40·45	16
...	...	...	...	45	156	1·47	·25	...	15·94	3·43	6·13	...	11·03	38·25	41·69	17
1	...	...	1	37	99	...	...	...	2·29	2·29	30·32	·56	21·17	56·63	62·93	18
11	1	...	16	195	703	...	·13	...	17·51	3·01	10·91	1·03	12·50	45·09	42·40	19
14	1	...	16	275	731	·35	·09	2·75	5·81	2·23	7·99	·70	12·02	31·94	30·33	20
6	...	...	6	36	448	...	...	...	23·54	1·73	1·65	·39	2·39	29·70	32·09	21
7	...	2	9	97	403	...	...	·45	10·23	4·22	7·45	·68	7·29	30·32	35·28	22
8	...	1	9	68	403	...	·40	1·98	14·52	·48	8·49	·71	5·40	31·98	27·46	23
5	...	...	5	54	236	...	...	·42	15·32	·41	2·29	·52	5·63	24·59	36·98	24
3	...	...	3	52	154	...	...	...	21·73	1·20	6·56	·89	15·48	45·86	41·99	25
1	2	...	3	18	216	...	...	...	22·72	·52	1·95	·39	2·33	27·91	27·77	26
1	...	...	1	49	160	...	...	...	12·43	·42	2.52	·14	6·82	22·33	32·94	27
5	...	...	5	44	171	...	·11	4·46	8·01	·79	·57	·57	5.04	19·55	21·49	28
796	3	12	865	14,026	45,376	·12	·30	·29	6·28	3·63	21·02	·90	14·56	47·10	43·75	29
11	...	...	13	307	1,041	...	...	...	2·62	2·27	16·38	·38	9·06	30·71	52·34	30
4	...	...	4	39	268	...	...	...	11·00	1·19	3·57	·28	2·73	18·77	43·31	31
3	...	1	5	70	256	...	...	...	9·42	2·45	11·49	·65	9·03	33·04	40·51	32
34	1	...	35	1,249	6,023	·10	·79	·25	12·72	3·88	19·82	·28	9·89	47·73	58·41	33
8	...	...	8	117	335	2·75	...	...	7·06	4·43	6·38	·78	11·48	32·88	45·14	34
...	...	...	...	74	147	...	...	...	6·33	·37	2·36	...	9·19	18·25	34·76	35
11	...	1	12	95	371	...	·16	...	15·94	1·22	4·15	·98	7·72	30·17	35·38	36
2	...	...	2	24	167	...	...	...	11·45	·45	4·08	·23	2·72	18·93	29·37	37
...	...	...	...	85	507	...	·10	...	6·75	1·45	5·33	...	2·75	16·38	20·61	38
1	...	...	1	97	264	...	...	...	1·33	3·10	13·97	·11	10·76	29·27	41·13	39
55	...	...	55	953	3,600	·03	·21	·07	34·46	1·77	5·94	·90	15·61	58·99	94·59	40
8	...	2	11	93	663	...	·06	...	27·91	1·55	1·37	·61	5·14	36·64	66·59	41
16	1	...	18	305	1,304	...	...	...	24·30	5·91	4·14	·63	10·69	45·67	56·11	42
7	2	1	10	155	635	·27	·27	·05	16·08	3·32	5·19	·54	8·30	34·02	40·72	43
1	...	...	1	44	225	2·75	...	·14	14·42	3·43	3·98	·14	6·05	30·91	41·21	44
1	2	...	4	34	135	...	...	...	6·05	1·78	·80	·36	3·03	12·02	37·76	45
2	...	...	4	21	149	...	...	...	10·37	2·57	·32	·43	2·24	15·93	37·86	46
7	2	...	9	32	316	...	...	15·16	7·70	4·67	4·55	1·05	3·73	36·86	39·54	47
5	1	...	6	129	357	...	·44	...	8·91	1·08	3·60	·38	8·15	22·56	28·75	48
4	...	...	5	237	554	·06	...	...	10·75	·98	6·25	·29	13·70	32·03	30·06	49
5	3	...	8	189	572	·63	...	...	10.65	1·49	4·22	·36	8.56	25·91	25·00	50
2	...	...	2	36	236	·17	...	...	9·92	1·11	5·73	·17	3·08	20·18	26·93	51

ANNUAL FORM

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Injuries.	
No.	Districts and Towns.	Population according to Census of 1911.	Male.	Female.	Total.	Birth rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	B.—Towns—*contd.*													
	Belgaum District.													
52	Belgaum ...	31,451	451	431	882	28·04	...	8	121	289	34	178	2	...
53	Gokak ...	7,326	204	166	370	50·50	34	...	...	91	33	34	1	...
54	Athni ...	13,849	181	205	386	27·87	...	...	...	47	30	64	2	4
55	Nipani ...	10,779	154	167	321	29·78	...	...	2	96	28	36	...	1
56	Belgaum Cantonment.	9,300	15	11	26	2·79	...	...	4	31	3	11	...	...
	Dharwar District.													
57	Dharwar ...	29,370	469	486	955	32·52	2	...	99	205	60	205	...	...
58	Hubli ...	61,440	939	902	1,841	29·96	...	...	126	537	79	449	...	...
59	Gadag-Bettigeri ...	30,429	753	596	1,349	44·33	...	2	175	315	104	184	3	3
60	Ranebennur ...	10,931	275	260	535	48·94	...	1	...	43	28	81	...	...
61	Nawalgund ...	7,045	79	87	166	23·56	...	...	...	39	11	9	...	...
	Bijapur District.													
62	Bijapur ...	27,569	460	420	880	31·92	...	...	...	81	46	173	4	1
63	Bagalkot ...	17,294	351	315	666	38·51	...	6	...	183	40	72	2	...
64	Guledgudd ...	15,249	281	267	548	35·94	...	6	...	218	14	60	2	...
65	Ilkal ...	10,233	160	156	316	30·88	...	1	...	128	4	52	...	...
	Kanara District.													
66	Karwar ...	18,045	150	135	285	15·79	...	7	...	67	11	3	...	1
67	Kumta ...	10,343	139	183	322	31·13	...	30	...	80	27	35	...	...
68	Gokarn ...	5,304	115	109	224	42·23	...	...	...	55	27	57	...	...
69	Honawar ...	7,323	128	99	227	31·00	...	6	...	52	32	9	...	...
70	Bhatkal ...	7,141	122	96	218	30·53	...	10	...	69	18	9	...	...
	Surat District.													
71	Surat ...	1,14,733	1,708	1,452	3,160	27·54	...	9	...	615	270	1,656	2	1
72	Bulsar ...	15,972	243	202	445	27·86	...	...	...	109	21	97	1	1
73	Rander ...	10,689	125	119	244	22·82	...	...	...	115	6	103	...	...
	Broach District.													
74	Broach ...	43,353	764	804	1,568	36·17	...	...	...	165	21	680	...	...
75	Jambusar ...	8,991	218	206	424	47·16	...	...	...	85	12	111	...	...
76	Ankleshwar ...	11,344	216	210	426	37·55	...	...	...	209	5	72	...	...
	Kaira District.													
77	Kaira ...	7,297	92	86	178	24·40	...	...	...	97	11	123	...	...
78	Mehmadabad ...	6,330	105	115	220	34·76	...	...	...	96	7	40	...	...
79	Nadiad ...	27,145	544	460	1,004	36·99	...	53	...	707	38	370	...	...
80	Borsad ...	11,860	285	284	569	47·98	...	...	...	119	34	138	1	...
81	Anand ...	10,139	185	147	332	32·74	...	...	...	223	17	31	...	...
82	Umreth ...	13,651	329	262	591	43·29	...	...	...	132	11	161	...	1
83	Dakore ...	7,785	112	128	240	30·83	...	...	...	135	37	70	...	...
84	Kapadvanj ...	13,126	302	249	551	41·98	...	...	...	170	11	187	...	...
	Panch Mahals District.													
85	Godhra ...	22,102	239	190	429	19·41	...	...	...	283	5	16	...	...
86	Dohad ...	9,303	242	239	481	51·70	...	...	...	253	4	8	...	...
	Ahmedabad District.													
87	Ahmedabad ...	2,14,000	4,631	4,231	8,862	41·41	...	8	...	2,459	500	4,939	4	4
88	Dhandhuka ...	8,040	147	129	276	34·32	...	...	...	202	10	44	...	...
89	Viramgaon ...	20,769	304	272	576	27·73	...	19	...	489	10	191	...	...
90	Dholka ...	13,693	242	246	488	35·64	...	...	...	209	15	64	...	...
91	Ahmedabad Cantonment.	2,305	12	17	29	12·58	...	...	...	31	...	3	...	...

No. VI—*continued.*

RIES.				12	13	14										15
						Ratio of Deaths per 1,000 of population.										
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.		No.
														For the year.	Mean of previous five years.	
17	...	...	19	438	1,087	...	·25	3·85	9 19	1·08	5·66	·60	13·93	34·56	24·56	52
4	...	...	5	112	309	4·64	...	...	12·42	4·50	4·64	·68	15·29	42·18	51·05	53
5	...	...	11	52	204	...	...	...	3 39	2·17	4·62	·79	3·75	14·73	39·64	54
8	...	...	9	67	238	...	...	·19	8·90	2·60	3·34	·88	6·22	22·08	31·73	55
1	...	...	1	54	104	...	...	·43	3·33	·32	1·18	·11	5·81	11·18	22·80	56
17	...	2	19	367	957	·07	...	3·37	6·98	2·04	6·98	·65	12·49	32·58	42·36	57
16	3	4	23	520	1,734	...	...	2·05	8·74	1·29	7·31	·37	8·46	28·22	43·57	58
17	2	1	26	420	1,226	...	·06	5·75	10·35	3·41	6·04	·85	13·80	40·25	44·60	59
3	1	...	4	242	399	...	·09	...	3 93	2 56	7·41	·37	22·14	36·50	66·97	60
1	...	...	1	53	113	...	...	...	5·54	1·56	1·28	·14	7·52	16·04	27·40	61
14	...	...	19	340	659	...	...	...	2·94	1·67	6·28	·68	12·33	23·90	38·78	62
6	1	3	12	275	588	...	·35	...	10·58	2·32	4·16	·69	15·90	34·00	54·06	63
5	...	...	7	130	435	...	·39	...	14·30	·92	3·93	·46	8·52	28·52	30·95	64
...	...	...	...	209	394	...	·10	...	12·51	·39	5·08	...	20·42	38·50	50·13	65
4	...	...	5	81	174	...	·39	...	3·71	·61	·17	·28	4·49	9·64	18·84	66
2	1	...	3	114	289	...	2·90	...	7·73	2·61	3·39	·29	11·02	27·94	28·81	67
5	...	...	5	126	270	...	...	...	10·37	5·09	10·75	·24	23·76	50.90	39·97	68
2	...	...	2	67	168	...	·82	...	7·10	4·37	1·23	·27	9·15	22·94	26·90	69
2	1	...	3	43	152	...	1·40	...	9·66	2·52	1·26	·42	6·02	21·28	27·73	70
35	2	1	41	1,286	3,877	...	·08	...	5·36	2·35	14·43	·36	11·21	33·79	40·58	71
4	...	...	6	108	341	...	...	...	6·83	1·31	6·07	·38	6·76	21·95	24·96	72
...	...	...	...	52	276	...	...	...	10·76	·56	9·64	...	4·86	25·82	38·46	73
15	3	2	20	457	1,343	...	...	...	3·81	·48	15·69	·46	10·54	30·98	45·39	74
9	1	1	11	69	288	...	...	...	9·45	1·34	12·35	1·22	7·67	32·03	46·78	75
7	2	...	9	58	353	...	...	...	18·42	·44	6·35	·79	5·11	31·11	34·67	76
3	...	...	3	32	266	...	...	...	13·29	1·51	16·86	·41	4·38	36·45	57·75	77
...	...	...	...	64	207	...	...	...	15·16	1·11	6·32	...	10·11	32·70	46·29	78
15	1	1	17	251	1,436	...	1·95	...	26·05	1·40	13·63	·63	9·24	52·90	54·02	79
3	...	...	4	269	564	...	...	...	10·03	2·87	11·63	·34	22·68	47.55	47·28	80
1	...	...	1	119	391	...	...	...	21 99	1·68	3·06	·09	11·74	38·56	40·91	81
14	...	...	15	225	564	...	...	...	9·67	·81	13·26	1·10	16·48	41·32	45·37	82
8	2	1	11	85	358	...	...	...	17·34	4·75	11·56	1·41	10·92	45·98	50·56	83
3	1	...	4	97	469	...	...	...	12·96	·84	14·24	·30	7·39	35·73	47·80	84
10	...	...	10	140	454	...	...	...	12·81	·23	·72	·45	6·33	20·54	26·51	85
1	...	...	1	65	331	...	...	...	27·20	·43	·86	·11	6·98	35·58	59·36	86
105	5	16	134	2,683	10,723	...	·03	...	11·49	2·34	23·08	·63	12·54	50·11	58·49	87
4	...	...	4	50	310	...	...	...	25·13	1·24	5·47	·50	6·22	38·56	59·95	88
22	1	2	25	173	907	...	·92	...	23·54	·48	9·20	1·20	8·33	43·67	51·39	89
1	...	1	2	94	384	...	...	...	15·26	1·10	4·67	·15	6·86	28·04	57·25	90
1	...	...	1	8	43	...	...	...	13·45	...	1·30	·43	3·47	18·65	33·84	91

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Injuries.	
No.	Districts and Towns.	Population according to Census of 1911.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	Karachi District.													
92	Karachi ...	140,511	3,715	3,468	7,183	51·12	...	73	311	1,484	87	1,019	...	1
93	Tatta ...	11,161	77	74	151	13·52	...	7	10	75	7	69	...	...
94	Kotri ...	7,256	61	54	115	15·84	...	19	...	85	7	31	...	...
95	Karachi Cantonment .	6,004	98	84	182	30·31	...	...	...	22	...	...	...	...
	Hyderabad District.													
96	Hyderabad ...	69,140	1,342	1,091	2,433	35·19	...	193	5	676	67	669	...	2
97	Halla ...	5,853	62	37	99	16·21	...	...	...	54	...	9	...	...
98	Matiari ...	6,487	76	55	131	20·20	...	30	...	20	3	66	...	...
99	Hyderabad Cantonment.	5,883	29	22	51	8·67	...	...	...	30	...	...	...	...
	Thar and Parkar District.													
100	Umarkot ...	3,946	32	33	65	16·47	...	7	...	66	...	11	...	...
101	Mirpurkhas ...	4,856	22	14	36	7·42	...	1	...	73	1	20	...	...
	Nawabshah District.													
102	Nawabshah ...	1,886	41	34	75	39·77	...	...	...	50	...	...	...	...
103	Tando Adam ...	10,013	154	114	268	26·76	...	4	1	159	...	31	...	...
	Larkana District.													
104	Larkana ...	16,046	273	224	497	30·97	...	2	...	308	2	37	...	...
105	Kambar ...	6,286	68	92	160	25·45	...	...	...	177	...	...	...	...
106	Ratodero ...	5,411	106	84	190	35·11	...	...	...	111	2	...	...	...
107	Sehwan ...	4,749	40	37	77	16·21	...	1	...	49	...	68	...	...
	Sukkur District.													
108	Sukkur ...	34,916	641	531	1,172	33·57	...	12	...	668	8	49	...	...
109	Shikarpur ...	53,944	831	581	1,412	26·17	...	...	4	818	33	109	2	...
110	Rohri ...	9,919	158	155	313	31·56	...	3	...	218	7	17	...	...
111	Gari Yasin ...	6,549	123	96	219	33·44	...	2	...	151	...	1	...	...
	Upper Sind Frontier District.													
112	Jacobabad ...	11,340	122	92	214	18·87	...	...	...	148	1	8	...	...
	Total of Towns ...	3,179,621	46,929	42,458	89,387	28·11	285	959	2,364	32,651	7,389	40,213	79	41
	Total for the Presidency.	19,587,383	3,09,463	2 83,712	5,93,175	30·28	2,047	3,536	13,857	2,66,092	29,895	96,486	285	219

No. VI—*continued.*

RIES.				12	13	14 RATIO OF DEATHS PER 1,000 OF POPULATION.								From all causes.		15
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	For the year.	Mean of previous five years.	No.
93	...	1	95	2,650	5,719	...	·52	2·21	10·56	·62	7·25	·68	18·86	40·70	33·50	92
2	...	...	2	54	224	...	·63	·91	6·71	·63	6·18	·17	4·84	20·07	35·12	93
2	...	...	2	6	150	...	2·61	...	11·72	·96	4·27	·28	·83	20·67	46·03	94
1	...	...	1	37	60	...	...	...	3·66	.....	...	·16	6·17	9·99	52·27	95
36	1	...	39	447	2,096	...	2·79	·07	9·78	·97	9·68	·56	6·46	30·31	44·52	96
1	...	...	1	5	69	...	...	...	9·24	.....	1·54	·17	·85	11·80	24·43	97
1	...	...	1	35	155	...	4·62	...	3·09	·46	10·18	·15	5·40	23·89	51·64	98
1	1	...	2	32	64	...	...	...	5·10	.....	...	·34	5·44	10·88	22·98	99
...	...	...	...	5	89	...	1·78	...	16·72	.....	2·79	...	1·26	22·55	60·56	100
...	...	...	...	3	98	...	·21	...	15·04	·21	4·13	...	·62	20·21	60·34	101
...	...	...	...	2	52	...	...	...	26·50	.....	...	...	1·06	27·57	32·56	102
3	1	...	4	5	204	...	·40	·10	15·88	.....	3·10	·40	·50	20·38	37·65	103
4	...	...	4	91	444	...	·13	...	19·19	·13	2·30	·26	5·66	27·67	51·16	104
...	...	...	...	8	185	...	...	...	28·16	.....	...	...	1·27	29·44	45·85	105
2	...	...	2	3	118	...	...	...	20·51	·37	...	·37	·55	21·80	46·57	106
...	...	...	...	37	155	...	·21	...	10·32	.....	14·31	...	7·79	32·63	43·38	107
21	1	...	22	102	861	...	·35	...	19·13	·23	1·40	·63	2·92	24·66	41·21	108
9	5	...	16	597	1,577	...	...	·07	15·17	·61	2·02	·30	11·07	29·24	53·35	109
1	...	...	1	30	276	...	·30	...	21·98	·71	1·71	·10	3·02	27·83	54·95	110
2	...	...	2	3	159	...	·31	...	23·06	.....	·15	·31	·46	24·28	51·02	111
...	...	...	...	25	182	...	...	...	13·05	·08	·71	...	2·21	16·05	37·12	112
1,690	61	66	1,937	35,660	1,21,458	·09	·30	·74	10·27	2·32	12·65	·61	11·21	38·20	45·70	
5,711	1,300	206	7,721	1,41,662	5,61,296	·10	·18	·71	13·58	1·53	4·93	·39	7·23	28·65	44·16	

ANNUAL FORM No. VI (*a*).—DEATHS REGISTERED FROM CERTAIN DISEASES IN THE

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1911.	Malaria.		Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	A.—DISTRICTS.													
	Western Registration District.													
1	East Khándesh	903,053	1	...	...	...	13	·01	...	...	...	...	11,158	12·35
2	West Khándesh	538,084	2	·00	...	...	3	·00	...	...	...	...	5,878	10·92
3	Násik	813,511	1	...	...	...	31	·04	...	...	...	...	14,670	18·04
4	Thána	791,861	41	·05	...	...	20	·03	...	...	...	...	22,892	28·90
5	Kolába	567,043	15	·03	...	...	88	·15	...	...	...	...	13,568	23·93
	Central Registration District.													
6	Ahmednagar	888,096	3,131	3·53	...	...	54	·06	...	...	...	...	6,086	6·85
7	Poona	859,267	6,349	7·39	73	·08	34	·04	...	...	...	...	7,097	8·25
8	Sholápur	660,338	3,103	·46	18	·03	75	·11	...	...	...	...	5,651	8·56
9	Sátára	1,025,700	413	·40	49	·05	178	·17	...	...	...	...	15,643	15·25
10	Ratnágiri	1,186,710	120	·10	...	...	127	·11	...	...	...	...	12,608	11·09
	Southern Registration District.													
11	Belgaum	869,243	2,148	2·47	394	·45	489	·56	...	...	...	...	4,199	4·83
12	Dhárwár	885,871	1,932	2·18	420	·47	271	·30	...	...	...	...	7,512	8·48
13	Bijápur	792,582	1,314	1·66	79	·10	524	·66	...	...	...	...	7,828	9·87
14	Kánara	382,278	2,317	6·07	395	1·03	31	·08	...	...	...	...	3,218	8·41
	Gujarat Registration District.													
15	Surat	512,580	10	·02	...	...	2	·00	...	...	...	...	7,076	13·80
16	Broach	242,979	...	...	...	...	1	·00	...	...	...	...	2,976	12·25
17	Kaira	594,309	2	·00	...	...	16	·03	...	...	...	...	8,110	13·65
18	Panch Mahála	291,248	...	...	...	...	4	·01	...	...	...	...	3,866	13·28
19	Ahmedabad	568,530	2	·00	...	...	19	·03	...	...	...	...	11,527	20·29
	Sind Registration District.													
20	Karáchi	351,401	1,606	4·57	16	·05	36	·10	...	...	...	...	1,514	4·31
21	Hyderabad	523,747	671	1·28	16	·03	...	...	...	...	...	...	6,522	12·45
22	Thar and Párkar	424,563	1,371	3·23	23	·05	...	...	...	...	...	...	3,236	7·62
23	Nawábshah	436,579	1,492	3·41	17	·04	9	·02	...	...	...	...	4,011	9·20
24	Lárkana	628,336	3,131	4·98	19	·03	6	·01	...	...	...	...	7,510	11·95
25	Sukkur	468,207	3,278	7·00	98	·21	4	·02	...	...	...	...	2,759	5·89
26	Upper Sind Frontier	251,646	1,080	4·30	17	·07	...	...	...	...	...	...	1,927	7·66
	Total of Districts ...	16,407,762	30,730	1·87	1,634	·10	2,035	·12	...	...	...	...	199,042	12·07
	B.—TOWNS.													
	East Khandesh District.													
1	Jalgaon	17,195	...	...	...	...	4	·23	...	...	...	...	152	8·84
2	Bhusáwal	18,312	...	...	...	...	3	·16	...	...	...	...	304	16·60
3	Chopda	17,008	...	...	...	...	2	·12	...	...	...	...	154	9·05
4	Dharangaon	15,607	...	...	...	...	...	...	...	...	...	...	94	6·01
5	Parola	14,177	...	...	...	...	2	·14	...	...	...	...	155	10·93
6	Amálner	13,232	...	...	...	...	...	...	...	...	...	...	88	6·65
7	Erandol	13,144	...	...	...	...	...	...	...	...	...	...	144	8·67
8	Nasirabad	13,033	...	...	...	...	...	...	...	...	...	...	132	10·13
9	Chálisgaon	9,453	...	...	...	...	...	...	...	...	...	...	121	12·80
	West Khandesh District.													
10	Dhulia	30,757	...	...	...	...	5	·16	...	...	...	...	159	5·17
11	Nandurbar	11,839	...	...	...	...	...	...	...	...	...	...	90	7·60
	Nasik District.													
12	Násik	33,163	2	·06	...	...	19	·57	...	...	...	...	432	13·03
13	Yeola	16,275	...	...	...	...	...	...	...	...	...	...	271	16·65

DISTRICTS AND TOWNS OF THE BOMBAY PRESIDENCY DURING THE YEAR 1920.

10 Influenza.		11 Dysentery.		12 Diarrhœa.		13 Pneumonia.		14 Phthisis.		15 Other Respiratory Diseases.		16 Deaths from child birth.	17 Deaths under 1 year.			18 Infant mortality rate per 1,000 births.	19 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
92	·10	40	·04	912	1·01	...	...	97	·11	3,762	4·17	350	3,488	2,874	6, 2	161·78	1
283	·53	22	·04	108	·20	3	·00	129	·24	1,416	2·63	169	1,662	1,347	3,009	134·70	2
1,165	1·43	351	·43	568	·70	20	·02	52	·06	3,372	4·14	313	2,599	2,206	4,805	173·17	3
2,350	2·96	240	·30	168	·21	36	·05	407	·51	716	·90	218	1,621	1,374	2,995	152·39	4
578	1·02	114	·20	477	·84	28	·05	1,059	1·87	427	·75	155	1,521	1,240	2,761	161·39	5
173	·19	100	·11	1,546	1·74	28	·03	194	·22	3,332	3·76	2	2,595	2,096	4,691	169·63	6
571	·66	79	·09	1,863	2·17	56	·07	578	·67	3,118	3·63	104	2,595	1,946	4,571	168·72	7
94	·14	38	·06	1,174	1·78	133	·20	219	·33	1,064	1·61	83	2,070	1,649	3,719	134·96	8
172	·17	107	·14	3,105	2·99	56	·05	480	·47	1,329	1·30	198	3,089	2,509	5,598	168·49	9
611	·54	805	·71	270	·24	9	·01	2,729	2·40	2,714	2·39	101	1,325	1,124	2,449	81·04	10
1,095	1·25	145	·17	3,115	3·58	23	·03	607	·70	2,113	2·43	150	2,569	2,037	4,606	132·58	11
690	·76	146	·16	1,047	1·18	9	·01	635	·72	1,963	2·21	217	2,736	2,268	5,004	163·01	12
702	·89	231	·29	2,079	2·62	1	·00	341	·43	1,763	2·22	124	2,300	1,843	4,143	246·87	13
625	1·63	317	·83	789	2·06	25	·06	253	·66	477	1·25	252	1,392	1,177	2,569	220·33	14
1,010	1·07	111	·22	477	·93	1,368	2·67	648	1·26	3,741	7·30	21	1,926	1,759	3,685	178·69	15
4	·01	23	·10	243	1·00	350	1·44	238	·98	1,559	6·42	11	1,194	1,118	2,312	223·38	16
1,461	2·46	268	·45	663	1·12	382	·64	1,313	2·21	5,426	9·13	27	2,174	2,045	4,219	207·38	17
296	1·02	15	·06	196	·67	102	·35	182	·62	1,001	3·44	62	745	672	1,417	120·34	18
237	·42	129	·23	329	·58	401	·70	805	1·41	1,962	3·44	16	1,770	1,525	3,295	190·95	19
23	·07	10	·03	1	·00	125	·35	19	·05	38	·11	23	427	338	765	201·95	20
...	...	9	·02	9	·02	175	·33	3	·01	78	·15	79	808	699	1,507	181·46	21
...	...	11	·03	9	·02	135	·32	4	·01	113	·27	49	410	350	760	107·42	22
28	·07	13	·03	7	·02	80	·18	4	·01	62	·14	81	648	501	1,149	163·62	23
...	...	8	·01	2	·00	36	·06	8	·01	54	·09	12	995	770	1,765	165·79	24
...	...	4	·01	8	·02	21	·05	2	·00	39	·08	65	856	634	1,490	165·14	25
...	...	2	·01	...	...	20	·08	1	·00	5	·02	17	361	288	649	134·09	26
12,960	·75	3,341	·20	19,165	1·17	3,622	·22	11,007	·67	41,644	2·54	2,899	43,876	36,389	80,265	159·32	
...	...	4	·23	19	1·11	6	·35	19	1·11	51	2·96	14	67	58	125	230·20	1
8	·44	...	...	14	·76	4	·22	11	·60	63	3·44	14	51	66	117	231·23	2
21	1·23	...	...	5	·29	2	·12	3	·18	56	3·29	6	27	22	49	113·43	3
2	·12	...	...	18	1·15	...	...	4	·25	31	1·99	6	39	28	67	167·08	4
...	...	1	·07	14	·98	1	·07	3	·21	61	4·30	10	56	42	98	214·44	5
26	1·96	2	·15	1	·07	...	...	1	·07	68	5·14	6	17	15	32	109·22	6
1	·07	1	·07	7	·53	...	...	21	1·60	41	3·12	6	44	42	86	195·01	7
...	...	...	...	43	3·30	...	...	...	...	90	6·91	6	57	47	104	196·60	8
...	...	1	·11	2	·21	2	·21	2	·21	47	4·97	7	33	30	63	225·81	9
22	·71	1	·03	32	1·04	40	1·30	59	1·91	123	4·00	21	64	36	100	110·98	10
...	...	...	...	4	·33	1	·08	4	·33	68	5·74	5	30	27	57	140·39	11
29	·87	72	2·17	162	4·88	59	1·77	29	·87	294	8·86	31	163	145	308	291·94	12
...	...	19	1·23	13	·79	...	...	8	·49	68	4·18	10	48	56	104	236·90	13

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1911.	Malaria.		Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Nasik District—concluded.													
14	Málegaon	19,542	...	...	...	...	...	...	...	...	...	...	276	14·12
15	Igatpuri	8,380	...	...	...	...	7	84	...	...	...	...	92	11·04
16	Manmad	6,947	...	...	...	...	...	...	...	...	...	...	73	10·51
17	Trimbak	4,078	...	...	...	...	...	...	...	...	...	...	65	15·94
18	Deolali Cantonment	1,748	1	·56	...	...	...	...	...	...	...	...	3	1·68
	Thana District.													
19	Thána	15,591	1	·06	...	...	...	...	...	...	...	...	272	17·45
20	Bandra	22,885	6	·26	...	...	...	...	...	...	...	...	127	5·55
21	Kurla	15,081	3	·20	...	...	...	...	...	...	...	...	352	23·34
22	Bhiwandi	13,292	44	3·31	...	...	9	·68	...	...	...	...	83	6·24
23	Kalyán	12,600	...	...	...	...	1	·08	...	...	...	...	182	14·44
24	Bassein	9,598	...	...	...	...	...	...	...	...	...	...	147	15·32
	Kolaba District.													
25	Alibág	3,358	...	...	...	...	1	·29	...	...	...	...	72	21·44
26	Panvel	7,744	...	...	...	...	...	...	...	...	...	...	176	22·72
27	Mahád	7,164	...	...	...	...	...	...	...	...	...	...	89	12·43
28	Uran	8,748	1	·11	...	...	...	...	...	...	...	...	69	7·90
29	City of Bombay	963,363	292	·30	133	·14	117	·12	43	·04	1	·00	5,460	5·67
	Ahmednagar District.													
30	Ahmednagar	33,878	32	·94	...	...	2	·06	...	...	...	...	55	1·62
31	Sangamner	14,269	38	2·66	...	...	...	...	...	...	...	...	119	8·34
32	Ahmednagar Cantonment	7,748	2	·26	...	...	...	...	...	...	...	...	71	9·16
	Poona District.													
33	Poona	126,201	413	3·27	157	1·24	26	·21	...	...	...	...	1,009	8·00
34	Baramati	10,190	4	·39	2	·20	1	·10	...	...	...	...	65	6·36
35	Khed	8,056	28	3·48	...	...	...	...	...	...	...	...	23	2·85
36	Lonávla	12,295	155	12·61	...	...	...	...	...	...	...	...	41	3·33
37	Junnar	8,800	5	·57	...	...	...	...	...	...	...	...	96	10·88
38	Poona Cantonment	30,958	4	·13	...	...	...	...	...	...	...	...	205	6·62
39	Kirkee do.	9,019	1	·11	...	...	...	...	...	...	...	...	11	1·22
	Sholapur District.													
40	Sholápur	61,032	1	·02	1	·02	70	1·14	...	...	...	...	2,029	33·28
41	Bársi	18,097	3	·17	...	...	9	·50	...	...	...	...	493	27·24
42	Pandharpur	28,550	2	·07	1	·03	4	·14	...	...	...	...	687	24·06
	Satara District.													
43	Sátára	18,665	1	·05	2	·11	10	·54	...	...	...	...	287	15·38
44	Wái	7,269	4	·55	7	·96	2	·28	...	...	...	...	92	12·63
45	Karád	11,228	...	...	1	·09	2	·18	1	·09	...	...	64	5·69
46	Ashta	9,351	...	...	1	·11	2	·21	...	...	...	...	94	10·05
47	Islámpur	8,574	1	·12	1	·12	...	...	...	...	...	...	64	7·46
	Ratnagiri District.													
48	Ratnágiri	15,822	5	·32	...	...	6	·38	...	...	...	...	130	8·21
49	Vengurla	17,294	12	·69	...	...	1	·06	...	...	...	...	173	10·00
50	Málwan	22,080	2	·01	...	...	...	...	...	...	...	...	233	10·56
51	Chipluń	11,696	...	...	...	...	3	·26	...	...	...	...	113	9·66
	Belgaum District.													
52	Belgaum ... +	31,451	11	·35	6	·19	19	·60	...	...	...	...	253	8·05
53	Gokák	7,326	...	...	17	2·32	...	...	...	...	...	...	74	10·10
54	Athni	13,849	5	·36	...	...	...	...	...	...	...	...	42	3·03
55	Nipáni	10,779	6	·56	1	·09	4	37	...	...	...	...	85	7·89
56	Belgaum Cantonment	9,300	...	...	...	...	2	22	...	...	...	...	29	3·11

No. VI (*a*)—*continued.*

10 Influenza.		11 Dysentery.		12 Diarrhœa.		13 Pneumonia.		14 Phthisis.		15 Other Respiratory diseases.		16 Deaths from child birth.	17 Deaths under 1 year.			18 Infant mortality rate per 1,000 births.	19 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
50	2·56	9	·45	10	·50	...	...	2	·10	84	4·30	9	73	65	138	195·19	14
1	·12	1	·12	4	·48	3	·36	...	...	25	3·00	4	16	4	20	66·58	15
7	1·01	4	·57	1	·14	2	·29	1	·14	19	2·74	2	17	12	29	278·84	16
...	...	3	·75	11	2·75	1	·25	1	·25	23	6·09	1	18	10	28	318·18	17
...	...	1	·56	3	1·68	37	21·17	5	2·78	11	5·60	...	11	8	19	558·82	18
29	1·86	36	2·31	11	·70	55	3·53	74	4·75	41	2·63	13	53	28	81	195·18	19
45	1·97	16	·70	35	1·53	79	3·45	58	2·53	46	2·01	2	62	46	108	226·89	20
...	...	26	1·73	...	...	3	·20	16	1·06	6	·39	2	42	15	57	224·41	21
14	1·05	26	1·96	30	2·26	42	3·16	43	3·24	14	1·05	14	26	30	56	215·27	22
...	...	6	·48	...	...	59	4·68	22	1·75	26	2·06	4	26	19	45	141·07	23
12	1·25	3	·31	1	·10	1	·10	21	2·19	...	...	11	23	22	45	214·28	24
18	5·36	...	...	4	1·20	...	...	18	5·36	4	1·20	1	13	11	24	269·66	25
...	...	...	...	4	·52	...	...	13	1·69	2	·26	4	17	12	29	195·94	26
...	...	...	...	3	·42	...	...	16	2·24	2	·28	4	9	9	18	134·33	27
...	...	1	·11	6	·68	...	...	1	·11	4	·46	10	9	10	19	237·50	28
1,577	1·64	1,094	1·13	2,407	2·50	11,740	12·19	1,606	1·67	6,902	7·17	422	5,760	5,047	10,807	555·60	29
2	·06	3	·09	74	2·18	271	8·00	85	2·51	199	5·87	2	99	62	161	271·04	30
...	...	1	·07	16	1·12	...	...	9	·63	42	2·94	...	23	22	45	133·93	31
7	·90	1	·13	18	2·32	5	·65	3	·39	81	10·45	...	23	18	41	153·56	32
304	2·41	66	·52	424	3·36	1,374	10·89	455	3·61	671	5·32	42	794	668	1,462	574·01	33
24	2·35	7	·69	38	3·74	32	3·14	17	1·67	16	1·57	1	31	15	46	142·86	34
6	·74	...	...	3	·37	...	...	4	·50	13	1·61	2	10	9	19	106·74	35
1	·08	...	...	15	1·22	12	·98	13	1·06	26	2·11	4	23	24	47	246·07	36
1	·11	...	...	4	·45	...	...	16	1·81	20	2·27	4	13	7	20	110·50	37
...	...	21	·68	24	·77	29	·94	50	1·61	86	2·78	8	44	16	60	652·17	38
...	...	12	1·33	16	1·77	50	5·54	17	1·89	59	6·54	...	26	37	63	1,105·26	39
16	·28	5	·08	103	1·69	29	·48	84	1·35	251	4·11	11	521	401	922	281·44	40
...	...	...	...	28	1·55	...	...	3	·16	22	1·21	2	111	75	186	257·61	41
7	·24	7	·24	162	5·67	2	·07	23	·81	93	3·26	6	260	213	473	772·87	42
...	...	12	·64	50	2·68	5	·27	60	3·21	32	1·71	1	62	41	103	282·97	43
...	...	...	...	25	3·43	...	...	10	1·37	19	2·61	5	15	9	24	114·83	44
17	1·51	...	...	20	1·78	...	...	4	·36	5	·44	2	8	6	14	108·53	45
...	...	...	...	24	2·57	...	...	...	...	3	·32	...	9	10	19	82·61	46
...	...	...	...	40	4·67	...	...	5	·58	34	3·97	3	10	8	18	102·86	47
60	3·79	12	·76	5	·32	2	·13	44	2·78	11	·69	...	24	17	41	100·73	48
9	·52	8	·46	9	·52	5	·29	43	2·49	60	3·47	3	35	26	61	102·35	49
37	1·68	27	1·22	6	·27	3	·14	52	2·36	38	1·72	1	39	28	67	124·30	50
5	·43	8	·68	5	·43	...	...	41	3·51	26	2·22	...	10	9	19	68·10	51
15	·48	3	·09	31	·98	28	·89	101	3·21	49	1·56	8	77	60	137	155·45	52
50	6·83	...	...	33	4·50	...	...	21	2·87	13	1·77	...	34	22	56	151·45	53
1	·07	...	...	30	2·17	...	...	25	1·80	39	2·82	2	15	8	23	59·59	54
24	2·23	1	·09	27	2·55	...	...	17	1·58	19	1·76	...	28	22	50	155·76	55
7	·75	...	...	3	·32	3	·32	...	...	8	·86	3	8	4	12	461·54	56

1	2	3	4		5		6		7		8		9	
	Districts and Towns.	Population according to Census of 1911.	Malaria.		Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Dharwar District.													
57	Dhárwár	29,370	13	·44	16	·54	12	·41	...	...	...	...	164	5·58
58	Hubli	61,440	185	1·38	19	·31	40	·65	...	...	...	...	393	6·39
59	Gadag Bettigeri	30,429	38	1·25	5	·16	3	·10	...	...	...	...	269	8·83
60	Ránebennur	10,931	7	·64	7	·64	13	1·19	...	...	...	...	16	1·46
61	Nawalgund	7,045	3	·42	...	...	3	·42	...	...	...	...	33	4·68
	Bijapur District.													
62	Bijápur	27,569	37	1·34	17	·62	6	·22	...	...	...	...	21	·76
63	Bágalkot	17,294	14	·81	7	·40	47	2·72	...	...	...	...	115	6·65
64	Guledgudh	15,249	22	1·44	...	...	25	1·64	...	...	...	...	171	11·21
65	Ilkal	10,233	17	1·66	2	·19	8	·78	...	...	...	...	101	9·87
	Kanara District.													
66	Kárwár	18,045	16	·89	3	·17	...	...	...	...	...	...	48	2·66
67	Kumta	10,343	60	5·80	5	·48	...	...	...	...	...	...	15	1·45
68	Gokarn	5,304	16	3·04	...	...	...	...	...	...	...	...	39	7·37
69	Honáwar	7,323	26	3·56	...	...	...	...	...	...	...	...	26	3·56
70	Bhatkal	7,141	...	...	...	...	...	...	...	...	...	...	69	9·66
	Surat District.													
71	Surat	1,14,733	207	1·81	37	·32	13	·11	4	·04	...	...	354	3·08
72	Bulsar	15,972	1	·06	...	...	...	...	...	...	...	...	108	6·77
73	Ránder	10,689	...	...	...	...	...	...	...	...	...	...	115	10·76
	Broach District.													
74	Broach	43,353	38	·88	...	...	...	...	...	...	...	...	127	2·93
75	Jambusar	8,991	19	2·11	...	...	...	...	...	...	...	...	66	7·34
76	Ankleshwar	11,344	...	...	...	...	1	·09	...	...	...	...	208	18·33
	Kaira District.													
77	Kaira	7,297	...	...	...	...	...	...	...	...	...	...	97	13·29
78	Mehmedabad	6,330	...	...	...	...	2	·32	...	...	...	...	94	14·84
79	Nadiád	27,145	...	...	...	...	3	·11	...	...	...	...	704	25·94
80	Borsad	11,860	...	...	...	...	...	...	...	...	...	...	119	10·03
81	Anand	10,139	...	...	...	...	...	...	...	...	...	...	223	21·99
82	Umreth	13,651	...	...	...	...	...	...	...	...	...	...	132	9·67
83	Dákore	7,785	...	...	...	...	2	·26	...	...	...	...	133	17·08
84	Kapadvanj	13,126	145	11·05	...	...	13	·99	...	...	...	...	12	·92
	Panch Mahals District.													
85	Godhra	22,102	...	...	...	...	...	...	...	...	...	...	283	12·81
86	Dohad	9,303	...	...	...	...	19	2·04	...	...	...	...	234	25·16
	Ahmedabad District.													
87	Ahmedabad	2,14,000	3	·01	1	·00	30	·14	...	...	1	·00	2,424	11·34
88	Dhandhuka	8,040	...	...	...	...	...	...	...	...	...	...	202	25·13
89	Viramgaon	20,769	...	...	...	...	2	·10	...	...	...	...	487	23·44
90	Dholka	13,693	...	...	...	...	1	·07	...	...	...	...	208	15·19
91	Ahmedabad Cantonment	2,305	...	...	...	...	...	...	...	...	...	...	31	13·45
	Karachi District.													
92	Karáchi	1,40,511	5	·05	32	·22	114	·82	...	...	...	...	1,333	9·48
93	Tatta	11,161	38	3·41	...	...	...	...	...	...	...	...	37	5·30
94	Kotri	7,256	75	10·34	...	...	7	·96	...	...	...	...	3	·41
95	Karáchi Cantonment	6,004	...	...	...	...	...	...	...	...	...	...	22	3·66

No. VI (*a*)—*continued.*

10 Influenza.		11 Dysentery.		12 Diarrhœa.		13 Pneumonia.		14 Phthisis.		15 Other Respiratory diseases.		16 Deaths from child birth.	17 Deaths under 1 year.			18 Infant mortality rate per 1,000 births.	19 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
16	·54	1	·03	59	2·01	13	·44	45	1·53	147	5·01	12	65	48	113	118·27	57
133	2·16	...	...	79	1·28	6	·10	168	2·75	275	4·47	4	108	100	208	112·44	58
194	6·37	35	1·15	69	2·27	125	4·11	20	·66	39	1·28	1	145	98	243	180·13	59
3	·28	...	...	28	2·56	...	...	37	3·38	44	4·02	9	56	38	94	175·70	60
...	...	1	·14	10	1·42	...	...	7	·99	2	·28	2	6	5	11	66·27	61
...	...	1	·04	45	1·63	37	1·34	67	2·43	69	2·50	1	59	42	101	240·48	62
18	1·04	2	·11	38	2·20	1	·06	28	1·62	43	2·49	3	91	61	152	482·54	63
105	6·89	1	·06	13	·85	...	...	9	·59	51	3·34	4	26	19	45	168·54	64
84	8·21	...	...	4	·39	1	·08	27	2·64	24	2·34	...	41	20	61	391·04	65
...	...	1	·06	10	·55	...	...	2	·11	1	·06	...	15	5	20	70·28	66
5	·48	16	1·55	11	1·06	...	...	5	·48	30	2·90	3	21	26	47	145·96	67
12	2·26	25	4·71	2	·38	13	2·45	13	2·45	31	5·84	4	27	13	40	178·57	68
...	...	13	1·78	19	2·59	...	...	4	·55	5	·68	5	18	15	33	145·38	69
...	...	10	1·39	8	1·12	...	...	5	·70	4	·56	1	14	7	21	96·33	70
261	2·27	87	·76	183	1·59	759	6·62	491	4·27	406	3·54	70	521	440	961	304·11	71
4	·25	5	·31	16	1·00	24	1·50	20	1·25	53	3·32	2	38	38	76	170·79	72
...	...	4	·37	2	·19	2	·19	17	1·59	84	7·86	...	18	26	44	180·33	73
126	2·91	4	·09	17	·39	63	1·46	173	3·99	444	10·24	...	171	123	294	187·50	74
...	...	11	1·23	1	·11	9	1·00	11	1·23	91	10·12	1	48	48	96	226·42	75
21	1·85	2	·18	3	·26	9	·80	15	1·32	48	4·23	...	37	37	74	173·71	76
2	·27	3	·41	8	1·10	4	·55	18	2·47	101	13·84	...	23	24	47	264·04	77
2	·31	1	·16	6	·95	9	1·42	17	2·69	14	2·21	...	33	22	55	250·00	78
209	7·70	12	·44	26	·96	193	7·11	110	4·05	67	2·47	15	201	202	403	401·99	79
57	4·80	31	2·62	3	·25	20	1·68	...	...	118	9·95	3	77	76	153	268·89	80
11	1·08	8	·79	9	·89	...	...	...	...	31	3·06	...	58	52	110	331·33	81
30	2·20	2	·15	9	·66	3	·21	10	·73	168	12·32	...	71	63	134	226·73	82
30	3·85	9	1·15	28	3·60	8	1·03	20	2·57	62	7·96	...	32	38	70	291·67	83
6	·46	1	·08	10	·76	24	1·82	53	4·04	110	8·38	...	54	61	115	208·71	84
34	1·54	1	·05	4	·18	1	·05	...	...	15	·67	...	62	71	133	310·02	85
...	...	2	·22	2	·22	...	...	...	...	8	·86	1	42	33	75	155·92	86
64	·30	93	·44	407	1·90	332	1·55	1,071	5·01	3,536	16·52	...	1,658	1,533	3,191	360·08	87
2	·25	2	·25	8	·99	9	1·12	15	1·87	20	2·48	...	43	27	70	253.62	88
37	1·78	5	·24	5	·24	47	2·26	51	2·46	93	4·48	...	102	82	184	319·45	89
1	·07	6	·44	9	·66	5	·36	20	1·46	39	2·85	...	44	56	100	204·92	90
7	3·04	...	...	...	...	1	·43	...	...	2	·87	...	4	2	6	206·90	91
470	3·34	13	·09	74	·53	213	1·52	212	1·51	594	4·22	78	1,002	803	1,805	251·29	92
...	...	1	·08	6	·55	34	3·05	28	2·50	7	·63	4	21	21	42	278·14	93
...	...	5	·69	2	·07	18	2·48	6	·82	7	·97	4	19	18	37	321·74	94
1	·16	...	...	...	...	...	...	...	...	...	...	...	8	5	13	71·43	95

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1911.	Malaria.		Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*concluded.*													
	Hyderabad District.													
96	Hyderabad	69,140	543	7·85	69	1·00	28	·40	...	...	...	...	36	·52
97	Halla	5,853	15	2·56	3	·52	...	...	...	...	...	...	36	6·16
98	Matiari	6,487	18	2·77	...	...	...	...	...	...	...	...	2	·31
99	Hyderabad Cantonment	5,883	...	...	...	...	...	...	...	...	...	...	30	5·10
	Thar and Parkar District.													
100	Umarkot	3,946	29	7·34	...	...	...	...	...	...	...	...	37	9·38
101	Mirpurkhas	4,856	60	12·36	...	...	...	...	...	...	...	...	13	2·68
	Nawabshah District.													
102	Nawábsháh	1,886	8	4·24	...	...	...	...	...	...	...	...	42	22·27
103	Tando Adam	10,013	65	6·49	...	...	...	...	...	...	...	...	94	9·49
	Larkana District.													
104	Lárkána	16,046	139	4·66	...	...	...	...	...	...	...	...	169	10·53
105	Kambar	6,286	14	2·23	...	...	...	...	...	...	...	...	163	25·95
106	Ratodero	5,411	15	2·17	...	...	...	...	...	...	...	...	96	17·74
107	Sehwan	4,749	11	2·32	...	...	...	...	...	...	...	...	38	8·00
	Sukkur District.													
108	Sukkur	34,916	92	2·63	...	...	3	·09	...	...	...	...	573	8·41
109	Shikárpur	53,944	103	1·91	349	6·46	8	·15	...	...	...	...	358	6·65
110	Rohri	9,919	...	...	...	...	...	...	...	...	...	...	218	21·98
111	Garhi Yasin	6,549	92	4·05	...	...	...	...	...	...	...	...	59	9·01
	Upper Sind Frontier District.													
112	Jacobabád	11,340	...	...	...	...	...	...	...	...	...	...	148	13·05
	Total of Towns ...	3,179,621	3,174	1·00	902	·28	736	·22	48	·01	2	·00	27,789	8·74
	Total for the Presidency ...	19,587,383	33,904	1·73	2,536	·13	2,771	·14	48	·00	2	·00	2,26,881	11·58

N.B.—Districts A in this statement do not include the population or deaths of Influenza deaths also

No. VI (*a*)—*continued.*

10 Influenza.		11 Dysentery.		12 Diarrhœa.		13 Pneumonia.		14 Phthisis.		15 Other Respiratory diseases.		16 Deaths from child birth.	17 Deaths under 1 year,			18 Infant mortality rate per 1,000 births.	19 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
15	·20	31	·45	36	·52	185	2·67	342	4·95	142	2·05	44	351	300	651	267·57	96
...	...	...	...	...	...	9	1·54	...	...	...	...	4	11	6	17	171·72	97
....	...	1	·15	2	·31	52	8·02	4	·62	10	1·54	5	16	6	22	167·94	98
...	...	...	...	...	...	...	...	...	...	...	...	...	4	6	10	196·08	99
...	...	...	...	...	...	11	2·79	...	...	...	...	1	5	7	12	184·61	100
2	·41	...	...	1	·21	11	2·27	...	...	9	1·86	2	3	13	16	444·44	101
...	...	...	...	...	...	...	...	...	...	...	...	1	5	6	11	146·67	102
...	...	...	...	...	...	26	2·60	3	·30	2	·20	5	23	22	45	167·91	103
...	...	1	·07	1	·07	23	1·43	5	·31	9	·56	95	63	55	118	237·42	104
...	...	...	...	...	...	...	...	...	...	...	...	4	17	20	37	231·25	105
...	...	1	·18	1	·18	...	...	...	...	...	...	...	13	19	32	168·42	106
10	2·11	...	...	...	...	33	6·95	9	1·89	26	5·47	3	7	14	21	272·73	107
...	...	2	·06	6	·17	38	1·09	7	·20	4	·11	21	166	93	259	220·99	108
...	...	16	·30	17	·31	68	1·26	12	·22	29	·54	73	268	210	478	338·52	109
3	30	...	...	7	·71	10	1·01	2	·20	5	·50	12	41	35	76	242·81	110
...	...	...	...	...	...	...	...	1	·15	...	...	2	32	22	54	246·57	111
...	...	1	·08	...	...	7	·63	...	...	1	·08	10	33	20	53	247·67	112
4,430	1·39	1,988	·62	5,401	1·70	16,445	5·17	6,443	2·02	17,325	5·45	1,264	15,360	13,051	28,411	317·84	
16,690	·85	5,329	·27	24,566	1·25	20,067	1·02	17,450	·89	58,969	3·01	4,163	59,236	49,440	1,08,676	183·21	

Towns B. In all other Statements "Districts" include Towns.
included in other Fevers.

ANNUAL FORM No. VII.—DEATHS *registered from* CHOLERA *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from cholera were reported.	Number in each District.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	3	1,438	5	...	...	...	...	...	.....
2	West Khándesh ...	10	1	1,096	1	...	...	...	...	...	1
3	Násik	19	5	1,649	6	...	...	...	...	...	1
4	Thána	18	4	1,643	9	...	...	...	1	...	.....
5	Kolába	14	2	1,461	2	...	...	...	...	1	.....
6	City of Bombay ...	1	1	1	1	2	...	...	1	...	50
	Central Registration District.										
7	Ahmednagar	15	1	1,348	1	...	...	...	...	...	.....
8	Poona	18	6	1,201	27	...	...	...	...	...	4
9	Sholápur	10	6	718	13	...	3	...	...	...	1
10	Sátára	19	16	1,346	149	1	...	2	...	5	68
11	Ratnágiri	15	11	1,311	27	15	52	16	1	...	2
	Southern Registration District.										
12	Belgaum	15	6	1,070	20	...	2	1	...	...	.....
13	Dhárwár	18	2	1,295	2	...	...	2	...	2	.....
14	Bijápur...	13	8	1,122	36	...	...	...	...	...	.....
15	Kánara...	16	...	1,265	...	...	...	...	...	...	.....
	Gujarát Registration District.										
16	Surat	12	1	760	1	...	...	...	1	...	.....
17	Broach...	9	...	409	...	...	...	...	...	...	.....
18	Kaira	15	1	586	1	...	1	...	...	...	.....
19	Panch Mahála ...	7	...	660	...	...	...	...	...	...	.....
20	Ahmedabad	13	...	880	...	...	...	...	...	...	.....
	Sind Registration District.										
21	Karáchi	16	...	665	...	...	...	...	...	...	.....
22	Hyderabad	11	...	864	...	...	...	...	...	...	.....
23	Thar and Párkar ...	13	...	901	...	...	...	...	...	...	.....
24	Nawábsháh	9	...	721	...	...	...	...	...	...	.....
25	Lárkána	15	...	737	...	...	...	...	...	...	.....
26	Sukkur...	12	...	684	...	...	...	...	...	...	.....
27	Upper Sind Frontier.	6	...	422	...	...	...	...	...	...	.....
	Total for the Presidency.	361	74	26,253	301	18	58	21	4	8	127

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1920.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	6 TOTAL. Female.	6 TOTAL. Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Female.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
1	10	12	...	...	...	9	14	23	·02	·03	·02	·96	1
...	...	...	...	...	...	1	...	1	·00	...	·00	1·84	2
...	3	41	5	...	...	28	22	50	·05	·05	·05	1·39	3
1	1	26	7	...	...	16	20	36	·03	·05	·04	1·62	4
...	...	...	...	...	2	1	2	3	·00	·00	·00	3·14	5
48	8	8	1	...	1	104	15	119	·16	·05	·12	2·13	6
...	...	...	5	...	...	3	2	5	·01	·00	·01	1·31	7
8	5	6	118	47	3	100	91	191	·19	·17	·18	1·04	8
2	1	1	54	...	...	40	22	62	·10	·06	·08	1·22	9
407	446	55	59	38	2	561	522	1,083	1·04	·96	1·00	·76	10
1	1	6	2	...	...	50	46	96	·09	·07	·08	·52	11
10	48	40	59	2	...	95	67	162	·19	·14	·17	1·89	12
...	...	...	...	...	...	3	1	4	·01	·00	·00	1·08	13
4	41	22	113	24	6	105	105	210	·24	·24	·24	1·46	14
...	...	...	...	...	...	...	...	...	...	...	...	·36	15
...	...	...	...	...	...	...	1	1	·00	·00	·00	·84	16
...	...	...	...	...	...	...	...	...	·00	·00	·00	·83	17
...	...	...	...	...	...	...	1	1	·00	·00	·00	·88	18
...	...	...	...	...	...	...	...	...	·00	·00	·00	·59	19
...	...	...	...	...	...	...	...	...	·00	·00	·00	·20	20
...	...	...	...	...	...	...	...	...	...	...	...	·51	21
...	...	...	...	...	...	...	...	...	...	...	...	·11	22
...	...	...	...	...	...	...	...	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	...	...	...	·03	24
..	...	...	...	...	...	...	...	...	...	...	...	·06	25
...	...	...	...	...	...	...	...	...	...	...	...	·17	26
...	...	...	...	...	...	...	...	...	...	...	...	·05	27
482	564	217	423	111	14	1,116	931	2,047	·11	·10	·10	1·00	

ANNUAL FORM No. VIII.—DEATHS *registered from* SMALL-POX *in the*

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		January.	February.	March.	April.	May.	June.
		Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.						
	Western Registration District.										
1	East Khándesh ...	22	6	1,438	14	9	6	5	5	1	4
2	West Khándesh ...	10	4	1,096	12	3	2	3	1	3	2
3	Násik	19	14	1,649	18	5	4	8	...	1	13
4	Thána	18	12	1,643	24	2	1	7	12	10	3
5	Kolába	14	8	1,461	16	4	3	3	3	6	2
6	City of Bombay ...	1	1	1	1	13	37	88	75	37	26
	Central Registration District.										
7	Ahmednagar	15	5	1,348	5	2	...	2	1	...	1
8	Poona	18	13	1,201	20	19	28	26	21	1	10
9	Sholápur	10	7	718	9	2	5	...	3	3	4
10	Sátára	19	14	1,346	35	20	18	3	6	2	3
11	Ratnágiri	15	11	1,311	42	6	4	10	10	14	11
	Southern Registration District.										
12	Belgaum	15	11	1,070	98	39	50	88	41	31	15
13	Dhárwár	18	13	1,295	72	20	25	25	36	17	18
14	Bijápur	13	12	1,122	68	25	32	43	18	11	10
15	Kánara	16	14	1,265	154	44	55	79	52	83	78
	Gujarát Registration District.										
16	Surat	12	5	760	12	2	6	...	6	5	3
17	Broach	9	...	409	...	...	...	...	..	...	...
18	Kaira	15	2	586	7	2	3	12	11	22	10.
19	Panch Mahále	7	...	660	...	...	...	...	...	...	...
20	Ahmedabad	13	6	880	16	1	10	6	8	4	14
	Sind Registration District.										
21	Karáchi	16	14	665	46	33	44	62	53	70	17
22	Hyderabad	11	10	864	54	97	75	93	58	28	3
23	Thar and Párkar ...	13	12	901	21	...	12	12	7	9	2
24	Nawábsháh	9	8	721	61	16	22	47	46	65	14
25	Lárkána	15	16	737	106	122	88	54	52	48	4
26	Sukkur	12	13	684	25	11	17	17	37	10	1
27	Upper Sind Frontier ...	6	6	422	17	7	2	8	7	10	6
	Total for the Presidency.	361	287	26,253	953	504	547	656	569	505	274

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1920.*

July.	August.	September.	October.	November.	December.	6 — TOTAL. Male.	6 — TOTAL. Female.	6 — TOTAL. Total.	7 — NUMBER OF THESE DEATHS AMONG CHILDREN. Under 1 year.	7 — NUMBER OF THESE DEATHS AMONG CHILDREN. Under 10 years.	8 — TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	8 — TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION. Female.	8 — TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION. Total.	9 — Mean ratio per 1,000 of previous five years.	10 — No.
1	...	...	...	...	...	14	15	29	10	16	·03	·03	·03	·42	1
1	2	1	...	...	...	9	9	18	4	4	·03	·03	·03	·91	2
1	...	...	...	...	...	20	12	32	9	15	·04	·03	·04	·29	3
2	6	3	2	...	3	20	31	51	14	29	·04	·07	·06	·21	4
...	...	...	...	..	2	7	16	23	5	16	·02	·05	·04	·30	5
5	5	...	...	1	3	181	109	290	48	91	·29	·33	·30	·70	6
1	...	...	...	...	...	2	5	7	3	3	·00	·01	·01	·17	7
7	3	3	2	...	...	69	65	134	42	74	·13	·12	·13	·26	8
...	1	3	1	...	...	11	11	22	2	14	·03	·03	·03	·32	9
...	3	...	1	1	3	23	37	60	19	18	·04	·07	·06	·70	10
2	2	1	...	3	1	28	36	64	15	27	·05	·05	·05	·23	11
16	6	2	2	3	4	112	135	247	60	73	·23	·26	·06	·06	12
6	9	1	3	...	10	92	78	170	46	48	·18	·15	·17	·11	13
9	8	7	1	5	...	87	87	174		87	·20	·20	·20	·07	14
82	53	40	14	20	18	349	269	618	60	122	1·58	1·28	1·44	·34	15
4	...	1	...	1	2	17	13	30	6	15	·05	·04	·05	·19	16
...	...	...	...	...	...	...	...	...	...	...	...	...	...	·13	17
1	...	...	...	1	4	23	43	66	27	34	·06	·13	·10	·06	18
...	...	...	...	...	...	...	...	...	...	...	...	...	...	·06	19
6	...	...	...	3	7	31	28	59	18	27	·07	·07	·07	·15	20
4	1	...	...	...	...	170	114	284	20	42	·59	·50	·55	·18	21
3	1	...	...	...	...	176	182	358	17	39	·52	·66	·58	·06	22
8	3	...	...	4	20	41	36	77	10	12	·19	·17	·18	·00	23
6	...	...	..	..	2	122	96	218	36	75	·49	·48	·49	·03	24
...	1	...	...	...	...	210	159	369	60	152	·58	·53	·56	·10	25
1	...	...	2	...	-	47	49	96	23	17	·15	·18	·17	·05	26
...	...	...	...	...	...	19	21	40	5	16	·13	·13	·15	·07	27
166	104	62	28	42	79	1,880	1,656	3,536	610	1,071	·18	·18	·18	·23	

ANNUAL FORM No. IX.—DEATHS *registered from* FEVERS *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from fevers were reported.	Number in each District.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	22	1,438	1,303	863	1,000	1,308	1,554	1,215	667
2	West Khándesh ...	10	10	1,096	1,096	592	467	713	711	396	303
3	Násik	19	19	1,649	1,631	1,278	1,260	2,887	2,154	953	952
4	Thána	18	18	1,642	1,590	2,243	4,401	4,915	2,265	1,309	856
5	Kolába	14	14	1,461	1,423	1,461	2,672	2,404	1,151	736	553
6	City of Bombay ...	1	1	1	1	700	744	568	564	512	364
	Central Registration District.										
7	Ahmednagar ...	15	15	1,348	1,166	743	698	975	1,445	861	508
8	Poona	18	18	1,201	1,106	1,698	1,587	1,850	1,820	1,331	957
9	Sholápur	10	10	718	573	766	862	728	987	930	600
10	Sátára	19	19	1,346	1,263	1,189	1,112	1,645	1,781	1,576	1,260
11	Ratnágiri	15	15	1,311	1,236	1,527	2,043	1,980	928	971	725
	Southern Registration District.										
12	Belgaum	15	15	1,070	950	681	901	1,783	1,084	549	483
13	Dhárwár	18	18	1,295	1,143	1,371	1,360	2,110	1,149	712	577
14	Bijápur	13	13	1,122	1,046	840	1,080	1,390	1,129	906	827
15	Kánara	16	16	1,265	1,035	511	519	873	854	587	435
	Gujarát Registration District.										
16	Surat	12	12	760	688	498	1,180	1,825	640	473	455
17	Broach	9	9	409	343	261	332	296	291	311	261
18	Kaira	15	15	586	561	605	1,402	1,999	1,108	568	510
19	Panch Maháls ...	7	7	660	543	270	299	727	640	302	259
20	Ahmedabad ...	13	13	880	862	1,195	1,368	2,166	1,565	1,019	802
	Sind Registration District.										
21	Karáchi	16	16	665	665	943	574	448	342	392	424
22	Hyderabad ...	11	11	864	864	1,372	791	899	800	741	549
23	Thar and Párkar...	13	13	901	901	905	528	505	468	452	371
24	Nawabshah ...	9	9	721	721	802	564	591	690	684	489
25	Lárkána	15	15	737	737	1,650	1,156	1,048	1,350	1,441	899
26	Sukkur	12	12	684	684	942	715	783	851	977	603
27	Upper Sind Frontier	6	6	422	422	890	263	296	310	409	260
	Total for the Presidency ...	361	361	26,253	24,553	26,255	29,828	37,662	28,632	21,403	16,019

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1920.*

						6			7			8	9
						TOTAL.			RATIOOF DEATHS PER 1,000 OF POPULATION.				
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio of deaths per 1,000 previous five years.	No.
606	965	1,155	1,060	1,017	1,087	6,443	6,054	12,497	12·35	11·81	12·08	26·61	1
297	395	446	592	612	613	3,120	3,017	6,137	10·64	10·50	10·57	28·34	2
868	1,111	1,067	1,216	1,138	1,059	8,411	7,532	15,943	18·48	16·79	17·64	29·28	3
836	1,141	1,238	1,296	1,703	1,947	12,411	11,769	24,180	27·18	27·74	27·45	27·56	4
628	715	716	813	1,043	1,188	6,967	7,112	14,079	23·61	23·79	23·69	26·90	5
330	354	436	547	454	464	3,629	2,417	6,046	5·76	7·25	6·28	3·43	6
640	793	742	712	648	765	5,093	4,497	9,590	10·72	9·59	10·15	23·88	7
1,006	1,231	1,126	1,050	983	1,160	8,608	7,191	15,799	15·99	13·66	14·84	23·50	8
650	805	702	834	793	690	4,940	4,407	9,347	12·62	11·69	12·17	32·69	9
1,384	1,674	1,570	1,391	1,190	1,147	8,791	8,128	16,919	16·31	14·99	15·65	27·36	10
677	592	682	1,029	1,057	1,321	6,400	7,133	13,533	11·51	10·96	11·24	17·57	11
444	434	386	384	356	399	4,038	3,746	7,784	8·32	7·43	8·26	15·76	12
628	676	645	681	665	700	5,629	5,645	11,274	10·82	11·17	10·99	17·67	13
723	699	613	787	662	610	5,182	5,173	10,355	11·94	12·06	12·00	28·31	14
335	415	361	361	438	545	3,090	3,194	6,284	14·04	14·56	14·60	18·49	15
431	520	438	496	510	511	3,881	4,046	7,927	11·87	12·37	12·12	17·7	16
321	337	288	290	221	232	1,661	1,775	3,436	10·50	11·96	11·20	24·20	17
616	690	624	541	546	598	5,227	4,580	9,807	14·12	14·25	14·18	16·86	18
237	320	348	413	325	286	2,210	2,196	4,406	13·32	14·01	13·65	20·61	19
884	1,121	1,172	1,151	1,218	1,277	7,906	7,032	14,938	18·30	17·79	18·06	28·05	20
234	215	208	291	357	350	2,727	2,111	4,838	9·39	9·35	9·37	26·57	21
439	346	423	524	519	586	4,538	3,451	7,989	13·44	12·61	13·07	28·07	22
272	245	198	312	202	311	2,767	2,002	4,769	11·46	10·43	11·00	36·87	23
379	252	236	299	356	396	3,319	2,419	5,738	13·39	12·40	12·81	35·27	24
679	508	486	615	715	764	6,351	4,960	11,311	17·68	16·44	17·12	31·09	25
545	378	471	485	567	677	4,478	3,516	7,994	14·32	13·48	13·94	34·52	26
191	195	173	253	255	177	1,779	1,393	3,172	12·22	11·61	12·06	33·28	27
15,329	17,127	17,005	18,422	18,550	19,860	139,596	126,496	266,092	13·70	13·46	13·58	23·94	

ANNUAL FORM No. X.—DEATHS *registered from* DYSENTERY *and* DIARRHŒA

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	20	1,438	303	57	56	80	70	94	80
2	West Khándesh ...	10	10	1,096	70	10	6	15	12	7	18
3	Násik	19	19	1,649	388	106	81	84	74	82	82
4	Thána	18	17	1,643	192	59	54	53	33	31	28
5	Kolába...	14	14	1,461	297	81	69	75	34	36	29
6	City of Bombay ...	1	1	1	1	315	286	223	212	179	193
	Central Registration District.										
7	Ahmednagar	15	15	1,348	566	92	104	122	102	136	145
8	Poona	18	18	1,201	587	147	139	144	153	151	183
9	Sholápur	10	10	718	279	77	70	64	60	100	86
10	Sátára	19	19	1,346	676	116	81	82	87	154	328
11	Ratnágiri	15	15	1,311	381	104	115	74	75	80	63
	Southern Registration District.										
12	Belgaum	15	15	1,070	616	151	121	184	214	347	355
13	Dhárwár	18	18	1,295	375	133	145	127	96	117	113
14	Bijápur	13	13	1,122	560	142	108	95	111	117	148
15	Kánara	16	16	1,265	358	124	86	67	92	66	87
	Gujarát Registration District.										
16	Surat	12	12	760	198	43	43	58	46	80	80
17	Broach...	9	9	409	114	1	15	13	22	20	31
18	Kaira	15	15	586	245	52	47	84	70	75	111
19	Panch Mahâls ...	7	7	660	98	9	13	6	24	11	18
20	Ahmedabad ...	13	12	880	187	93	105	71	56	33	60
	Sind Registration District.										
21	Karáchi	16	11	665	12	7	17	11	7	10	10
22	Hyderabad	11	11	864	16	1	11	11	6	15	4
23	Thar and Párkar ...	13	7	901	8	5	...	...	6	1	1
24	Nawabshah	9	6	721	11	...	...	4	...	...	2
25	Lárkána	15	8	737	9	1	4	...	1	1	3
26	Sukkur...	12	9	684	9	4	2	3	5	4	14
27	Upper Sind Frontier .	6	3	422	3	...	...	...	1	...	1
	Total for the Presidency ...	361	330	26,253	6,559	1,930	1,773	1,750	1,669	1,947	2,273

in the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1920.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	6 TOTAL. Female.	6 TOTAL. Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Female.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
88	164	157	88	77	73	563	521	1,084	1·08	1·02	1·05	1·57	1
10	30	31	6	10	12	78	89	167	·26	·30	·28	·65	2
121	159	158	141	75	69	711	521	1,232	1·56	1·16	1·36	1·45	3
56	83	51	58	46	46	356	242	598	·78	·57	·68	·98	4
56	78	36	42	40	33	354	255	609	1·20	·85	1·04	1·84	5
244	391	406	393	281	378	1,979	1,522	3,501	3·14	4·56	3·63	2·92	6
177	212	204	186	150	129	1,009	750	1,759	2·12	1·60	1·86	3·03	7
290	403	321	296	191	154	1,439	1,133	2,572	2·67	2·15	2·42	2·87	8
157	229	200	212	140	122	805	712	1,517	2 05	1·89	1·98	3·63	9
622	774	471	336	196	136	1,728	1,655	3,383	3·21	3·06	3·13	2·69	10
83	124	103	101	108	125	615	540	1,155	1·12	·83	·96	1·91	11
429	528	346	300	221	192	1,733	1,655	3,388	3·62	3·57	3·60	3·49	12
148	150	137	122	91	96	749	726	1,475	1·44	1·44	1·44	1·56	13
269	343	306	343	274	163	1,186	1,228	2,414	2·73	2·86	2·79	2·75	14
95	175	136	111	92	90	648	573	1,221	2·94	2·72	2·84	2·63	15
162	144	82	57	44	46	465	420	885	1·42	1·28	1·35	1·03	16
52	77	44	12	10	7	159	145	304	1·00	·98	·99	1·03	17
163	158	133	91	54	59	625	472	1,097	1·69	1·47	1·59	1·33	18
22	54	33	17	5	11	127	96	223	·77	·61	·69	·58	19
103	150	123	74	53	72	557	436	993	1·29	1·10	1·20	1·37	20
10	4	10	8	8	10	74	38	112	·25	·16	·21	·40	21
9	10	6	4	6	5	48	40	88	·14	·15	·15	·03	22
...	5	...	1	2	...	17	4	21	·07	·02	·05	·16	23
1	3	4	...	3	3	13	7	20	·05	·03	·04	·08	24
2	...	1	...	1	...	12	2	14	·03	·01	·02	·05	25
3	8	...	6	6	5	33	27	60	·11	·19	·11	·18	26
1	...	...	...	...	...	1	2	3	·01	·02	·01	·15	27
3,373	4,456	3,499	3,005	2,184	2,036	16,084	13,811	29,895	1·58	1·47	1·53	1·76	

ANNUAL FORM No. XI.—DEATHS *registered from* RESPIRATORY DISEASES *i*

1	2	3		4		5					
	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		January.	February.	March.	April.	May.	June.
		Number in each District.	Number from which deaths from Respiratory Diseases were reported.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.						
	Western Registration District.										
1	East Khándesh ...	22	22	1,438	954	436	429	480	473	356	220
2	West Khándesh ...	10	10	1,096	583	179	185	220	167	125	84
3	Násik ...	19	19	1,649	968	388	391	444	473	295	146
4	Thána ...	18	18	1,643	430	163	207	283	157	134	106
5	Kolába ...	14	14	1,461	563	139	186	224	137	115	104
6	City of Bombay ...	1	1	1	1	2,106	2,032	1,806	1,724	1,668	1,418
	Central Registration District.										
7	Ahmednagar ...	15	15	1,348	887	357	403	492	452	371	232
8	Poona ...	18	18	1,201	784	712	602	724	719	519	402
9	Sholápur ...	10	10	718	342	186	196	151	224	174	129
10	Sátára ...	19	19	1,346	543	170	160	152	174	157	155
11	Ratnágiri ...	15	15	1,311	995	600	644	673	466	464	427
	Southern Registration District.										
12	Belgaum ...	15	15	1,070	706	244	286	370	302	274	209
13	Dhárwár ...	18	18	1,295	720	421	411	446	299	231	233
14	Bijápur ...	13	13	1,122	513	261	243	300	214	224	170
15	Kánara ...	16	16	1,265	475	58	80	139	91	65	50
	Gujarát Registration District.										
16	Surat ...	12	12	760	699	604	1,128	1,039	615	478	604
17	Broach ...	9	9	409	301	205	359	314	272	263	251
18	Kaira ...	15	15	586	557	653	908	1,056	827	653	600
19	Panch Mahálś ...	7	7	660	384	84	98	206	161	84	76
20	Ahmedabad ...	13	13	880	572	710	903	1,016	937	618	505
	Sind Registration District.										
21	Karáchi ...	16	15	665	21	184	142	123	94	139	113
22	Hyderabad ...	11	9	864	31	151	125	110	142	81	66
23	Thar and Párkar ...	13	13	901	47	28	53	50	31	39	17
24	Nawábshah ...	9	9	721	40	55	25	27	9	8	7
25	Lárkána ...	15	13	737	14	29	11	26	37	22	23
26	Sukkur ...	12	12	684	14	46	29	16	23	27	21
27	Upper Sind Frontier.	6	5	422	6	3	9	...	9	3	1
	Total for the Presidency ...	361	355	26,253	12,150	9,172	10,245	10,887	9,229	7,537	6,369

the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1920.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	6 TOTAL. Female.	6 TOTAL. Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Female.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Total.	8 Mean ratio per 1,000 of previous five years.	No.
260	309	320	296	372	495	2,430	2,016	4,446	4·66	3·93	4·30	4·71	1
114	140	134	133	169	193	1,043	800	1,843	3·56	2·78	3·17	3·39	2
280	301	272	297	398	431	2,103	2,013	4,116	4·62	4·49	4·56	4·87	3
116	131	105	106	123	134	1,043	722	1,765	2·28	1·70	2·00	1·44	4
106	114	117	109	110	113	943	631	1,574	3·20	2·11	2·65	2·07	5
1,376	1,413	1,450	1,767	1,647	1,811	11,734	8,514	20,248	18 63	25·52	21·02	16·63	6
289	356	296	310	329	362	2,168	2,081	4,249	4·56	4·44	4·50	5·50	
473	546	457	493	491	571	3,517	3,197	6,714	6·54	6·07	6·30	6 07	8
117	120	141	177	151	157	977	946	1,923	2·49	2·51	2·50	2·79	9
167	185	206	204	172	140	994	1,048	2,042	1·85	1·93	1·89	2·13	10
387	371	405	406	413	521	3,248	2,529	5,777	5·86	3·89	4·81	4·12	11
228	219	230	207	223	274	1,580	1,486	3,066	3·30	3·20	3·25	3·54	12
248	290	245	244	199	269	1,737	1,798	3,535	3·34	3·96	3·45	4·45	13
162	176	179	196	151	186	1,351	1,111	2,462	3·11	2·59	2·85	3·48	14
57	67	79	66	36	80	491	377	868	2·23	1·79	2·02	1·46	15
595	589	420	461	515	615	4,140	3,473	7,613	12·67	10·62	11·64	10·42	16
240	265	197	197	212	235	1,677	1,333	3,010	10·60	8·98	9·82	9·22	17
668	699	605	548	499	565	4,655	3,626	8,281	12·58	11·28	11·97	9·09	18
81	82	72	93	127	145	780	529	1,309	4·70	3·37	4·06	1·98	19
553	561	570	522	592	922	4,711	3,698	8,409	10·90	9·36	10·16	9·14	20
89	81	59	73	81	123	719	582	1,301	2·47	2·58	2·52	2·55	21
54	39	59	44	53	76	566	434	1,000	1·68	1·59	1·64	1·78	22
5	6	7	9	15	23	198	85	283	·82	·44	·65	1·10	23
10	7	4	4	10	11	93	84	177	·38	·42	·40	.37	24
21	2	9	6	6	11	115	88	203	·32	·29	·30	·17	25
16	6	8	16	10	20	162	76	238	·52	·29	·41	·38	26
2	...	1	1	...	5	21	13	34	·14	·11	·13	·24	27
6,714	7,025	6,647	7,020	7,104	8,487	53,196	43,290	96,486	5·22	4·61	4·93	4·62	

ANNUAL FORM No. XII.—DEATHS *registered from* PLAGUE *in*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	17	1,438	114	461	610	870	201	7	...
2	West Khándesh ...	10	6	1,096	51	480	274	210	32	...	...
3	Násik ...	19	2	1,649	5	10	31	20	11	...	...
4	Thána ...	18	10	1,043	17	25	22	34	21	19	18
5	Kolába ...	14	4	1,461	19	34	56	38	13	14	...
6	City of Bombay ...	1	1	1	1	4	27	30	77	39	24
	Central Registration District.										
7	Ahmednagar ...	15	1	1,348	1	...	...	...	...	...	...
8	Poona ...	18	5	1,201	7	3	7	14	...	1	...
9	Sholápur ...	10	2	718	2	2	1	...	1	...	...
10	Sátára ...	19	12	1,346	98	234	266	144	23	23	57
11	Ratnágiri ...	15	1	1,311	1	2	...	...	...	...	...
	Southern Registration District.										
12	Belgaum ...	15	9	1,070	58	82	60	65	30	11	30
13	Dhárwár ...	18	15	1,295	212	357	313	145	28	35	127
14	Bijápur ...	13	3	1,122	10	14	16	6	...	...	...
15	Kánara ...	16	3	1,265	11	7	4	7	...	...	...
	Gujarát Registration District.										
16	Surat ...	12	...	760	...	...	...	...	...	...	...
17	Broach ...	9	...	409	...	...	...	...	...	...	...
18	Kaira ...	15	1	586	1	1	...	...	...	...	...
19	Panch Mahals ...	7	...	680	...	...	...	...	...	...	...
20	Ahmedabad ...	13	1	880	1	...	...	...	...	...	...
	Sind Registration District.										
21	Karáchi ...	16	6	665	7	8	23	52	158	90	15
22	Hyderabad ...	11	1	804	1	...	...	...	2	3	...
23	Thar and Párkar ...	13	...	901	...	...	...	...	...	...	...
24	Nawábshah ...	9	1	721	1	...	...	...	1	...	...
25	Lárkána ...	15	...	737	...	...	...	...	...	...	...
26	Sukkur ...	12	1	634	1	...	...	2	2	...	...
27	Upper Sind Frontier ...	6	...	422	...	...	...	...	...	...	...
	Total for the Presidency ...	361	102	26,253	619	1,724	1,710	1,637	600	242	271

the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1920.*

5						6			RATIO OF DEATHS PER 1,000 OF POPULATION.			8	9
						TOTAL.							
July.	August.	September	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
10	380	434	101	91	78	1,599	1,644	3,243	3·07	3·21	3·14	4·33	1
...	50	135	39	38	21	572	707	1,279	1·95	2·45	2·20	7·15	2
...	...	...	...	...	...	37	35	72	·08	·08	·08	5·08	3
14	16	14	13	4	3	116	87	203	·25	·21	·23	·69	4
4	22	12	1	3	1	90	108	198	·30	·36	·33	·42	5
27	34	8	4	...	7	210	71	281	·33	·21	·29	1·27	6
...	...	...	1	...	...	1	...	1	·00	·00	·00	3·87	7
1	1	2	8	7	6	29	21	50	·05	·03	·04	5·10	8
...	2	...	...	...	...	4	2	6	·01	·00	·01	9·97	9
176	319	457	449	333	197	1,322	1,356	2,678	2·45	2·50	2·48	10·27	10
...	...	...	...	...	...	2	...	2	·00	·00	·00	·26	11
71	215	186	212	127	39	570	558	1,128	1·19	1·24	1·20	6·97	12
162	530	637	689	583	500	1,989	2,117	4,106	3·82	4·19	4·01	6·03	13
2	37	46	19	6	15	78	83	161	·18	·19	·19	4·69	14
...	...	...	14	16	13	28	33	61	·13	·16	·14	·29	15
...	...	...	...	...	...	.....	...	...	...	...	...	1·64	16
...	...	...	...	...	...	.....	...	...	...	...	...	2·28	17
...	...	...	...	...	...	.....	1	1	·00	·00	·00	5·30	18
...	...	...	...	...	...	.....	...	...	...	...	...	1·59	19
...	...	1	...	...	...	1	...	1	·00	·00	·00	5·73	20
4	2	14	6	2	2	221	155	376	·76	·69	·73	1·87	21
...	...	...	...	...	...	3	2	5	·01	·01	·01	1·52	22
...	...	...	...	...	...	.....	...	...	...	...	...	·01	2
...	...	...	...	...	...	1	...	1	...	...	...	·10	24
...	...	...	...	...	...	.....	...	...	...	...	...	·07	25
...	...	...	...	...	...	3	1	4	·01	·01	·01	·77	26
...	...	...	...	...	...	.....	...	...	...	...	...	·13	27
471	1,608	1,946	1,556	1,210	882	6,876	6,981	13,857	·67	·74	·71	3·83	

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SECTIONS I TO IV—No remarks.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

Changes in area.—A new district, to be known as the "Bombay Suburban District" in which is included a new taluka called South Salsette, was formed from part of Salsette Taluka of Thana District with effect from 1st December 1920, *vide Government Gazette* dated 18th November 1920. Part of Kalyan Taluka to be known as "Ambernath Taluka" was added to the Bombay Suburban District with effect from 15th March 1921, *vide Government Gazette* of 3rd March 1921. The aim at Ambernath is to provide a new Industrial Township laid out on approved lines.

The new district, therefore, comprises Trombay Island and Salsette Island—all but its Northern and North-eastern tracts—with Ambernath as an enclave in the mainland. The question of a separate and full Health Staff for the rapidly developing Suburban area is under consideration.

In Poona District part of the Haveli taluka abutting on the municipalities and cantonments of "Greater Poona" was detached as a separate Poona Taluka with effect from 1st November 1919, *vide Government Gazette* dated 9th October 1919.

The name of Taluka Pithoro in Thar and Parkar District was changed to Samaro from June 1921.

2. The birth and death ratios in this report are calculated on the Census population of 1921. Notes on the Census appear in the following paragraphs of this section.

3. *Comparison of Birth and Death-rates.*—The marked change in population in certain areas renders comparison of the rates for the year under review, with those of immediately preceding years based on 1911 Census, of little value. In such cases total recorded figures offer a more just estimate of the state of health. In a few instances where necessary a rate for 1920 based on the estimated population of that year is also given in parenthesis* in the text of this report. In some of the minor tables in the text of this year's report further rates and figures have been given with the object of providing comparison with the last two decades.

4. *Europeans.*—The previous (1911) Census did not show this element of the population separately and birth and death rates throughout the decennium had to be calculated on the combined Civil and Military European population figure—30,192. The purely civil European population of the Bombay Presidency exclusive of Cantonments in Native States as separately enumerated in the 1921 Census is 19,247. 393 births and 397 deaths were recorded during the year as compared with 333 and 382 for the previous year. The calculated birth-rate per mille for 1921 is, therefore, 20·42 and the death-rate 20·62.

Of the 393 births, 208 were males and 185 females against 174 and 159 in 1920, while 264 male and 133 female deaths were recorded against 237 and 145 in 1920.

Of the 397 deaths, 4, 12, 83, 49 and 59 were due to cholera, small-pox, fever, dysentery and diarrhœa and respiratory diseases, respectively, against nil, 3, 79, 47 and 67 in 1920.

5. *Anglo-Indians.*—The 1921 Census shows the Anglo-Indian civil population of the Presidency to have increased to 10,221 from 8,902—the 1911 figure. 46 per cent. of the number live in Bombay City. The year's record of births—171, and of deaths—241 (equal to ratios of 16·73 and 23·58 respectively) are both slightly in excess of the 1920 figures of 166 and 210. The increase in both cases affects males only. Thus, births were 92 male and 79 female as compared with 86 and 80 in 1920 and deaths were 154 male and 87 female as compared with 124 and 86 in the previous year.

The relative increase in male deaths is from Bombay City where 122 male and 63 female deaths were recorded. In 1920, the Bombay figures were 103 and 59 respectively. Fever caused 26 deaths, dysentery and diarrhœa 26, respiratory diseases 51 and other causes 73. Epidemic diseases—cholera, small-pox and plague reported 1, 2 and 3 deaths, respectively, in Bombay City.

* *Note.*—The method of estimating the 1920 population adopted for this purpose is to add to the 1921 Census population, one-tenth of the decrease (or subtract one-tenth of the increase) since the 1911 Census.

Of the total 241 deaths in the Bombay Presidency, 3 were due to cholera, 2 to small-pox, 3 plague, 40 fevers, 28 dysentery and diarrhœa, 66 respiratory diseases, 4 injuries and 95 other causes as compared with nil, 4, 1, 30, 26, 71, 3 and 75, respectively, in 1920. Cholera, plague, fever, dysentery and diarrhœa and other causes showed an increase over previous year's figures.

6. *Census.*—The Census was taken on 18th March 1921.

It is of interest to compare some of the changes in population as shewn by the census with those shown by balancing the birth and death figures (natural increase or decrease) for the decade. The subjoined table shows the comparison by Collectorates. The three years 1917-1919 combined show a heavy loss in deaths exceeding the births recorded. The remaining 7 years of the decade recorded a " natural increase " in population, the births exceeding the deaths. Taking the decade in its two 5-year periods, 1911-1915 shows a total natural increase of 685 thousands while the second quinquennium registered an excess of deaths over births amounting to nearly one million two hundred and eleven thousand. The difference or net loss in the Indian civil population of the Presidency for the ten years is, therefore, 525,316 on this basis.

The causes of the surplus deaths in the 3 bad years were discussed in the reports for those years. Plague and (in Sind) malaria were the main factors in 1917; pandemic Influenza in 1918; while in 1919 the continuance of Influenza, in its acute form in certain areas, *e.g.*, parts of Sind and Bombay City and with less severity elsewhere plus epidemic cholera accounted for the abnormal incidence of death. It is to be noted despite the loss of potential parents shown by the greater mortality at ages 20 to 40 and amongst women as against men during the influenza pandemic, that the succeeding year, 1920, showed a recovery in a slight excess (31,879) of births over deaths. The year now under report shows the normal excess of births over deaths well established.

Registration of births and deaths is sometimes referred to as the current account of the population. It is admittedly an account indifferently kept in some registration areas of this Presidency. The resulting balance referred to above 5,25,316 is not more out of accord with the " stock-taking " total yielded by the census than is to be expected. The actual loss in Indian civil population of the whole Presidency as shown by the Census is 4,21,769.

The greater loss shown by registration compared to that shown by the (more accurate) census is only to be explained in part by the fact that registration omits many more births than deaths. The comparison assumes equal accuracy at both censuses.

Comparing the figures of loss obtained by registration with the corresponding census figures district by district very striking discrepancies are observed (*vide* Table).

In Ratnagiri District Registration shews that the numerical strength of the population was more than maintained by excess of births over deaths, whereas the census shews a fall in population. Emigration must be mainly accountable for the difference in results. The alternative—default in registration of deaths as compared with that of births, is nowhere the experience. Ahmednagar, Nasik, Kolaba, Kanara, Larkana, Sukkur and Nos. 10, 12, 14, 23 and 27 shew a lesser discrepancy of similar kind. The over-estimate of increase in population (according to registration) in Broach District is possibly subject to the same explanation.

Registration under-estimates considerably the increase of population of Bombay City, Ahmedabad, Karachi, Dharwar and Thana Districts and slightly in the case of Nos. 2, 16, 18 and 19 on the list which suggests immigration as the factor causing the greater census increase.

The over-estimate of the fall in population in Sholapur, Hyderabad and Nawabshah yielded by registration as compared with the census may be attributable to immigration being a factor compensating for natural decrease.

No.	Collectorate.	Census population 1911.	Excess for the years 1911-1920 of		1911 Census population plus Births and minus Deaths recorded 1911-20.	Census population 1921.	Resulting change in population. (Comparison between columns 6 and 7.)	
			Births over Deaths.	Deaths over Births.			Registration under-estimate.	Registration in Excess.
1	2	3	4	5	6	7	8	9
1	East Khandesh ..	1,034,214	40,644	..	1,074,858	1,075,122	264	..
2	West Khandesh ..	580,680	24,708	..	605,388	612,712	7,324	..
3	Nasik ..	903,644	..	31,739	871,905	825,216	..	46,689
4	Thana ..	880,908	..	21,595	859,313	908,340	49,027	..
5	Kolaba ..	594,057	..	841	593,216	562,472	..	30,744
6	City of Bombay ..	963,363	..	188,048	775,315	1,148,815	373,500	..
7	Ahmednagar ..	943,991	..	6,796	937,195	723,978	..	213,217

	Collectorate.	Census population, 1911.	Excess for the years 1911—1920 of		1911 Census population plus Births and minus Deaths recorded, 1911—20.	Census population, 1921.	Resulting change in population. (Comparison between columns 6 and 7.)	
			Births over Deaths.	Deaths over Births.			Registration under-estimate.	Registration in excess.
1	2	3	4	5	6	7	8	9
8	Poona ..	1,064,806	..	77,855	986,951	987,681	730	..
9	Sholapur ..	768,017	..	55,224	712,793	741,630	28,837	..
10	Satara ..	1,080,798	..	34,751	1,046,047	1,025,695	..	20,352
11	Ratnagiri ..	1,203,602	59,179	..	1,262,781	1,153,980	..	108,801
12	Belgaum ..	941,948	11,915	..	953,863	949,662	..	4,201
13	Dharwar ..	1,025,086	..	45,935	979,151	1,036,209	57,058	..
14	Bijapur ..	862,927	..	40,512	822,415	796,356	..	26,059
15	Kanara ..	430,434	..	5,407	425,027	401,476	..	23,551
16	Surat ..	653,974	14,458	..	668,432	674,121	5,689	..
17	Broac ..	306,667	10,031	..	316,698	307,711	..	8,987
18	Kaira ..	691,642	16,686	..	708,328	710,905	2,577	..
19	Panch Mahals ..	322,653	48,666	..	371,319	374,831	3,512	..
20	Ahmedabad ..	827,337	..	30,756	796,581	887,924	91,343	..
21	Karachi ..	516,333	..	21,725	494,608	530,657	36,049	..
22	Hyderabad ..	611,110	..	50,110	561,000	567,249	6,249	..
23	Thar and Parkar ..	433,365	..	35,386	397,979	396,307	..	1,672
24	Nawabshah ..	448,478	..	35,338	413,140	418,652	5,512	..
25	Larkana ..	660,828	..	30,034	630,794	597,937	..	32,857
26	Sukkur ..	573,535	..	31,753	541,782	509,362	..	32,420
27	Upper Sind Frontier ..	262,986	..	7,798	255,188	240,614	..	14,574
	Bombay Presidency Total ..	19,587,383	..	525,316	19,062,067	19,165,614	103,547	..

7. There are now, including Bombay City, 28 Collectorates comprising 251 rural (taluka or mahal), 105 town and 8 cantonment registration circles. In addition statistical returns are received from 7 cantonments in Native States.

Indian Population.—The population of (*a*) the rural circles is 15,437,218, of (*b*) the town circles 3,652,160 and of (*c*) the cantonments in British Territory 76,236 and (*d*) of the cantonments in native states 111,391 persons. Compared with the 1911 census the census figures represent respectively a percentage fall of (*a*) 8·4 and rise in (*b*) 36·5, (*c*) 24·8 and (*d*) 11·2. In the case of Bombay City there is an increase of 20·3 per cent. on the previous census. The increase in the census figures in the larger towns despite the general fall in population is a notable feature (*vide* Census Report). From the Public Health point of view this greater concentration of population indicates the necessity for increased expenditure and efficiency in municipal Public Health service.

Births.

8. 624,640 births were registered—an increase of 31,465 over the figure for 1920 but 45,159 less than the decennial mean. The number of births recorded in previous years is as follows :—

1901–1910 mean ..	617,736	1917 ..	699,823
1911 ..	705,090	1918 ..	619,224
1912 ..	684,890	1919 ..	546,460
1913 ..	684,803	1920 ..	593,175
1914 ..	733,076	1911–1920 mean ..	669,799
1915 ..	726,780	1921 ..	624,640
1916 ..	704,672		

The increase as compared with the previous year is distributed among the 5 Registration Districts, as follows :—

Western Registration District, 10,505 ; Guzerat 6,735 ; Sind 8,920 ; Central 4,929 and Southern Registration District 994.

All the districts throughout he Presidency show increase in births over the previous year's figures with the exception of Bombay City, Ahmednagar, Sholapur and Bijapur Collectorates.

9. The fall in birth-rate that became apparent about the last half of the decennium appears to be steadily recovering. The ratios per mille of population for 1919 and 1920 were 27·90 and 30·28 respectively. The ratio for 1921 (on the census of the year) shows a further rise to 32·59. For the Presidency alone, the birth-rate for the year was 36·00 against 33·60 (34·34 estimated) in 1920; and for the Province of Sind 22·90 against 18·75 in 1920 (estimated 20·01).* The rates recorded in other parts of India are given below :—

Bengal	28·0	Bihar and Orissa ..	34·64
Madras	27·05	United Provinces ..	34·39
Assam	29·63	Punjab ..	41·5
Burma	29·85	Central Provinces ..	37·90

In the Presidency proper excluding both Bombay City and Sind the birth-rate for rural areas was 37·29 and for urban areas 28·10.

10. Over rural areas the birth-rate varied from 50·39 for Chalisgaon Taluka in East Khandesh District to 14·78 for Poona Taluka in Poona District. Of the 190 talukas, pethas and mahals 128 or 67 per cent. returned birth-rates above 35, 49 returned rates between 35 and 30 and the remaining 13 or 7 per cent. returned birth-rates below 30 per mille of population. These latter are as follows :—

1 (Nawapur) in West Khandesh District; 3 (Bassein, North Salsette, and Kalyan) in Thana; 2 (South Salsette—16·41 and Ambernath) in Bombay Suburban; 1 (Kopergaon) in Ahmednagar; 2 (Mawal and Poona taluka—14·78) in Poona; 1 (Navalgund) in Dharwar; and 3 (Akola, Yellapur and Supa) in Kanara.

11. Out of eighty-five towns, 12 returned birth-rates over 40, *viz.*, Dholka (50·50), Nasirabad (46·28), Umreth (46·06), Borsad (45·65), Parola (43·63), Jambusar (43·16), Dhandhuka (43·07), Guledgud (41·80), Broach (41·05), Ankleshwar (40·91), Mehmedabad (40·73) and Ranebennur (40·70).

Six towns recorded birth-rates of between 35 and 40, and fifty-four towns recorded birth-rates between 35 and 20 per 1,000. In the remaining 13 towns, the recorded birth-rates were under 20. These are : Karwar (19·98), Karad (14·39), Satara (14·21) and (Kurla 9·75), all of which appeared in this category last year, and Kalyan (19·63), Chopda (19·61), Lonavla (19·38), Amalner (17·28), Godhra (17·76), Poona City (15·96), Uran (11·43), Poona Suburban (11·09) and Kurla (9·76). The drop in birth-rate in all these latter can only be fully explained by default in recording.

The failure of many municipalities to realize the importance of keeping check of the access and loss in their population by accurate registration has been commented on in successive reports. The extreme variation from the general birth figures (and the same applies to death figures) and in their own totals from year to year render their returns of little value in estimating the effects of natural influences on health conditions generally. Now that a new census has been taken is the time for local bodies to undertake more fully the responsibility they owe to their constituents in this matter. The effort made in Poona City resulting in a steady increase in registration of births through years (1916 to 1919) of declining birth-rate commented on in last year's report would appear to have been relaxed, although the improved registration of deaths seems to have been maintained.

12. 18,833 births were registered in Bombay City against 19,451 in 1920; the birth-rate being 19·54 against 20·19 (estimated 17·21) in the preceding year.

13. In Sind 74,661 births were recorded, an increase of 8,920 over the figure for 1920. The birth-rate for the year was 22·90 against 18·75 in 1920 (estimated 20·01).

In the Presidency proper the rural exceeds the urban birth-rate. In Sind the reverse is the case as in previous years, the urban rate being 33·80 and the rural 20·94 per 1,000 of population. Of the 19 urban circles in Sind, three returned birth-rates of over 35, *viz.*, Ratodero (44·02), Hyderabad (41·77) and Karachi (39·45). Three towns, *viz.*, Larkana (33·28), Rohri (30·93) and Garhiyasin (30·58) show rates between 30 and 35. For the rest the lowest figures were recorded in

* *Vide* note, page 1.

Tando Adam (16·50), Kotri (16·20) and Hala (12·33) and Mirpurkhas (9·54). Hyderabad city has shown a steady improvement in registration since the duty was entrusted to a special registrar.

Of the 60 talukas and mahals in Sind, only four returned birth-rates above 30, *viz.*, Sukkur (38·38) and Pano Akil (31·63) in Sukkur District, Ratodero (30·66) in Larkana, and Nawabshah taluka (34·00) in Nawabshah District. Twenty-eight returned rates between 20 and 30. The rates for the remaining 28 or 47 per cent. are all below 20 per mille of population; of these the following show excessively low rates of 14 per mille and under, *viz.*, 8 (Karachi, Kotri, Tatta, Mirpur Bathoro, Sujawal, Jati, Shah Bunder and Ghorabari) in Karachi District, 1 (Badin) in Hyderabad, 1 (Sakrand) in Nawabshah and 1 (Umerkote) in Thar and Parkar District.

The rural circles of Ghorabari, Tatta, Badin and Sakrand have returned low birth-rates for the last 15 years. This is largely attributable to default in registration.

Rural registration in Sind contrasts unfavourably with the Presidency. A competent machinery has yet to be established. But there is no excuse for the default shown in the records of so many of the municipalities of that Province and the remarks made in paragraph 11 apply to them in full. Thus in the three years 1919—1921 the Tando Adam recorded birth-rates were 33·76, 26·76 and 16·50 successively, showing variations that cannot be explained as the result of natural causes. Again Kotri, Hala and Mirpurkhas throughout the decade produced rates persistently low and varying and only explicable by default in registration.

14. *Births in Cantonments.*—Karachi (34·33), Nagar (24·56) and Kirkee (22·02) show the highest rates. In the remainder it was less than 20, the lowest (1·97) being recorded in Deolali Cantonment.

15. Out of 624,640 births 325,751 were males and 298,889 females. The excess in male births recorded remains fairly constant—108·99 males to every 100 females for the year in review; the previous year's figure was 109·08 and for the year before that 109·06. The relative figure for males was 105·39 in Belgaum District and 137·53 in Nawabshah District.

16. *Still-births.*—10,125 still-births or 1·62 for every 100 live births were registered. The corresponding figures for 1920 were 9,368 and 1·58. The percentage of still to live births recorded varied from ·04 for Ahmednagar District to 10·98 for the City of Bombay. For other areas Kanara (5·36), Bombay Suburban (2·99), Dharwar (2·94), Kolaba (2·66), Bijapur (2·38), Poona (2·36), Belgaum (2·22), Broach (2·11) and Karachi (2·08) show the highest percentages.

DEATHS.

17. The year stands out as one of exceptionally low mortality—the lowest *since the first issue of this Report* 30 years ago. Comparison with previous years is shown in graphic form on page 12.

As will be shown in the Section VI "History of Chief Diseases", the more ordinary causes of death claimed fewer victims, there was no unusual epidemic and such epidemic diseases as constantly recur were subdued in activity.

The total of deaths registered is 498,350 in contrast to 561,296 in 1920, 719,331, the decennial mean, and 612,329, the mean for the five pre-influenza years. The totals for other years of the decade are included in the following table:—

1901–1910 mean ..	639,483	1916 ..	652,584
1911 ..	555,312	1917 ..	798,406
1912 ..	683,210	1918 ..	1,724,674
1913 ..	521,539	1919 ..	637,170
1914 ..	577,504	1920 ..	561,296
1915 ..	511,613	1911–1920 mean ..	719,331
1911–1915 mean ..	569,836	1921 ..	498,350

18. The recorded death-rate for the whole Presidency works out to 26·00. The death-rate in 1920 was 28·65 calculated on 1911 population (on the population estimated for the year it would be 29·23),* 37·53 was the decennial mean and 31·26 the mean for the 5 pre-influenza years.

* *Vide* note at foot of page 1.

For other parts of India, the death-rates recorded are as follows :—

Madras ..	20·18	Bihar and Orissa: ..	32·83
Bengal ..	30·1	Punjab ..	30·1
Assam ..	26·48	United Provinces ..	39·57
Burma ..	21·45	Central Provinces ..	44·01

Excluding Bombay City and Sind, the death-rate for the Presidency was 28·04 (1921 census) against 30·34 in 1920 on 1911 census (on the population estimated for 1920, it would be 31·01). The death-rates for rural and urban areas in the Presidency as a whole were 23·89 and 34·84, respectively, against 29·69 and 35·20 in 1920.

By Districts the highest death-rate (35·22) was returned by Ahmednagar. The leap of Ahmednagar from the lowest place (23·13) last year to the most prominent place in this year's record calls for special comment. That district has suffered several famine years and the present year's death-rate figure may be taken to represent the relatively lowered vitality of the remaining population. The effects of famine were masked in recent years' rates based as they were, on the 1911 census population. A death-rate on an estimated population for 1920 (paragraph 3) = 29·28 only partly brings out the condition as depopulation probably occurred earlier in the decade.

Besides Ahmednagar, the only districts that show an increase of more than one per thousand in mortality compared with last year's figures are East Khandesh (death-rate 34), Sholapur (32·23) and Karachi (21·63). The increase in all three is chiefly under the headings Fever and Other Causes and to a slight extent under Respiratory Diseases (except in the case of Sholapur), Bowel diseases and Cholera.

The lowest district death-rate—19·98—is recorded by Panch Mahals.

19. Of the 190 talukas, pethas and mahals, only 4 (as compared with 15 in the year preceding) show death-rates exceeding 40 and all four are in Ahmednagar, *viz.*, Shevgaon (57·02), Karjat (47·24), Pathardi (46·77) and Newasa (42·71). Of the remainder, eleven exceed 35, *viz.*, Jamkhed (39·46), Jalgaon (39·04), Karmala (38·65), Pachora (38·06), Sangamner (37·20), Barsi (36·18), Yeola (36·06), Khalapur (35·99), Karjat (35·34), Nandgaon (35·12) and Chopda (35·07).

20. For urban areas, death-rates varied between 54·74 for Pandharpur and 6·25 for Nipani. Out of 85 urban registration areas, 8 returned death-rates over 40, besides Pandharpur ; these are, Chopda (51·62), Poona City (47·61), Parola (46·36), Barsi (44·94), Sholapur (44·37), Ahmedabad (40·10) and Nasirabad (40·04).

21. *Corrected Death-rates.*—The following table has been prepared according to the Registrar General of England's method. The standard death-rate of each town is the death that should occur provided the age and sex distribution of deaths were the same as for the Presidency proper ; in other words, it is the application of the death-rate at different age periods in the Presidency to the Census population of each town :—

—	Standard death-rate.	Factor for correction.	Recorded death-rate.	Corrected death-rate.
Presidency (excluding Bombay City and Sind)	39·8	1	28·04	28·04
Bombay City	28·6	1·39	46·25	64·29
Ahmedabad	37·6	1·06	40·10	42·51
Karachi	38·5	1·03	34·24	35·27
Poona	37·0	1·08	47·61	51·42
Sholapur	39·4	1·01	44·37	44·81
Surat	39·0	1·02	28·82	29·40

22. *Bombay City.*—The Census of 1921 shows the population of Bombay City to have increased to 1,148,815 from 963,363 in 1911 and the recent figure is used in calculating death-ratios for the year under report. The registered deaths amount to 53,131 equal to a death-rate of 46·25 as against 45,376 in 1920 equal to a death-rate of 47·10. The apparent contradiction expressed in the ratio figures results from their being based on different census populations. Calculated on an estimated population (*vide* paragraph 3) the 1920 death-rate would be 40·13. Similarly the quinquennial mean death-rate of 48·33 becomes 42·43 if based on the estimated

population of the first year of that period. The number of infantile deaths was 12,658 equal to a ratio of 672·12 per 1,000 births.

23. *Ahmedabad City.*—Population 1921 Census 270,599 (1911—214,000). The total deaths recorded were 10,850 as against (*a*) 10,492 in the year preceding and (*b*) 12,921 average for the quinquennium ending 1920. The corresponding death-ratios per thousand of population were 40·10 for 1921 as against (*a*) 50·11 and (*b*) 60·38. (The two latter rates if calculated on estimated populations would be (*a*) 40·47 and (*b*) 51·14, respectively.) The chief causes of deaths shown in the returns are fever and respiratory diseases.

10,359 births were registered equal to a birth-rate of 38·28 per 1,000 as compared with 8,499 births equal to birth-rate 39·71 in 1920. (The latter on estimated population would be 33·45.) The infantile deaths numbered 3,606, corresponding to a ratio of 348·10 per 1,000 births as compared with 3,081 and 362·51, respectively, in the preceding year.

24. *Poona City.*—Population 1921 Census (133,122). The total death-rate was 47·61 against 47·73 in 1920. The chief causes of deaths shown in the returns were fever and respiratory diseases. During the year, 1,863 infants under 1 year died against 1,462 in 1920. The infantile death-rate per 1,000 births amounted to 876·29 against 574·01 in the previous year.

25. *Karachi City.*—Population 1921 Census—199,014 (1911—140,511). The total deaths recorded were 6,816 as against 5,719 in the year preceding and 7,546 average for the quinquennium ending 1920. The corresponding death-ratios per 1,000 of population were 34·24 for the year under review compared with 40·70 in 1920 and 53·70 for the quinquennium. (Ratios estimated on corrected population would be 29·61 and 41·73 respectively.) Fevers and respiratory diseases are the chief causes of death shown in the returns.

7,852 births were registered equal to a birth-rate of 39·45 per 1,000 as compared with 7,183 births or a birth-rate 51·12 in 1920. (The estimated ratio would be 37·19.) The infantile deaths numbered 2,122 corresponding to a ratio of 270·25 per 1,000 births, as compared with 1,805 and 251·29, respectively, in 1920.

26. *Surat City.*—Population 1921 Census—117,428 (1911—114,733). The total deaths recorded were 3,384 as against 3,877 in the preceding year. The corresponding death-ratios per 1,000 of population were 28·82 as against 33·79. The chief causes of deaths shown in the returns were respiratory diseases.

2,870 births were registered equal to a birth-rate of 24·44 as compared with 3,160 births or a birth-rate of 27·54 in 1920. The infantile deaths numbered 950 corresponding to a ratio 331·01 per 1,000 registered births as compared with 961 and 304·11, respectively, in 1920. The birth records of the city are to be regarded as in default.

27. *Sholapur City.*—Population 1921 Census—119,347 (1911—61,032). The death-rate was 44·37, the total deaths recorded being 5,296 as against 3,600 in the year preceding and 5,452 the average for the quinquennium ending 1920. "Fevers" are the chief causes of deaths shown in the returns.

Birth-rate—27·79 per mille. 3,317 births were registered as compared with 3,276 births in 1920. The infantile deaths numbered 1,316 corresponding to a ratio of 396·74 per 1,000 births as compared with 922 and 281·44, respectively, in 1920.

The recent Census yielded a population figure 119,347, approximately double that of 1911 taken when an epidemic of plague had temporarily depopulated the city. The published death (and birth) rates throughout the decade are, therefore, to be discounted in any review or contrast. Thus; calculated on an estimated population for 1920, the death and birth-rates (respectively 31·71 and 28·86) offer a more reasonable comparison than 58·99 and 53·68, the rates calculated on the deflated 1911 census. (Similarly the rate for deaths (60·97) and for births (31·41) for the quinquennium ending 1920 based on a municipal enumeration held in 1911 is more in accord than when calculated on the same census.)

28. *Death-rate in Sind.*—The death-rate for Sind was 15·72 against 16·31 in 1920 (estimated 17·41). The excess of the urban rate 28·96—over the rural—13·34 is more marked as usual. The urban death-rate ranged between 10·88 for Tando Adam and 34·24 for Karachi.

29. *Death-rate in Cantonments.*—The lowest death-rate was 9·97 recorded in Deolali Cantonment and 28·09 in Nagar Cantonment was the highest. In Kirkee Cantonment the death-rate was 27·16. Respiratory diseases caused 127 deaths equal to a ratio of 15·89 per mille.

30. *Births* versus *Deaths.*—Over the Presidency as a whole, births exceed deaths by 126,290 (equal to a "Natural Increase" of ·66 per cent. on the population) compared with an excess of only 31,879 in 1920. In the Presidency alone, excluding Bombay City, the increase per cent. amounts to 0·93; for Sind the figure is 0·72, while for Bombay City the excess balance (34,298) is on the side of the deaths to the extent of 2·98 per cent. of the City's population. Further details are given in columns 6 and 9 of Annual Form No. II.

31. *Mortality according to Sex.*—263,865 male and 234,485 female deaths were recorded giving death-rates per thousand of each sex as enumerated in the census, of 26·26 and 25·72, respectively, against 28·96 and 28·33 for 1920. For every 100 females 112·53 males died compared with 110·81 in 1920. In Sind the ratio of male to female deaths during the year under report was as 125·19 to 100. Further remarks under this heading (with graphs) will be found at the end of the Section.

Infant Mortality.

32. One lakh eleven thousand two hundred and fifty-four deaths of children under the age of twelve months were recorded which is an increase of 2,578 over the preceding year's total. When studied in conjunction with other facts of the year's statistics it will be seen that there is nevertheless an improvement in infant as in the general mortality. The smaller total of infant deaths in 1920 and the still smaller total in 1919 is a consequence of the smaller number of births following on the Influenza pandemic, *i.e.*, fewer children were at stake, rather than that death was less active amongst them. That this is so becomes apparent when we compare either the ratios or the births and deaths jointly. Thus, for every 1,000 registered births 178·11 infants died during the year under report as against 183·21 in 1920 and 201·93 in 1919. The male (184·90) and female (170·71) infant death-rates per thousand born are also in favourable contrast with those for the preceding year—male 191·42, female 174·26 and with the male (206·70) and female (196·73) infantile death-rates for 1919.

The above facts are shown in the following table. There are other points to be noted in the table. The reduction in the infant mortality ratio is not commensurate with that in mortality at all ages. The unhealthy year 1918 manifests itself on the births of 1919. The proportion of the total deaths that appertains to infants would seem to vary inversely with the healthiness of the year, *vide* last column.

Infant Mortality, 1921, contrasted with Previous Years.

	Deaths under 12 months.			Births registered.			Infant death-rates per 1,000 births.			Infant deaths per 100 of total deaths.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
1921 ..	60,231	51,023	111,254	325,751	298,889	624,640	184·90	170·71	178·11	22·3
1920 ..	59,236	49,440	108,676	309,463	283,712	593,175	191·42	174·26	183·21	19·36
1919 ..	58,950	51,398	110,348	285,195	261,265	546,460	206·70	196·73	201·93	17·32
1918 ..	94,553	83,124	177,677	322,546	296,678	619,224	293·14	280·17	286·93	10·32
1917 ..	79,984	71,649	151,633	363,460	336,363	699,823	220·06	213·01	216·67	18·99
1916 ..	75,328	65,304	140,632	365,057	339,615	704,672	206·34	192·29	199·57	21·58
Average— 1911—1915 ..	71,278	61,286	132,564	366,746	340,182	706,928	194·35	180·16	187·52	23·26

Of the 111,254 infants who died, 44,119 were one month of age or under (24,022 under and 20,097 over one week). 38,571 were infants over one month and not exceeding six months and 28,564 over six months and not exceeding twelve months. The percentage of the total infant mortality under each of these three sub-groups

works out to 39·6, 34·7 and 25·7, respectively. The details of the average hundred infant deaths in each Registration District will be seen in the following table :—

Districts.	Infantile deaths		Not exceeding one month.	1–6 months.	6–12 months.
	in every 100 total deaths.	per 1,000 births.			
Southern R. D.	21·51	133·52	46·3	34·8	18·9
Sind R. D.	22·71	155·92	43·5	29·7	26·8
Western R. D.	22·06	173·34	40·6	37·3	22·1
Central R. D.	20·67	159·38	39·8	34·9	25·3
Guzerat R. D.	24·89	180·20	36·5	35·1	28·4
Bombay City	23·82	672·12	30·4	32·7	36·9
Presidency	22·32	178·11	39·6	34·7	25·7

Throughout the Presidency, mortality amongst infants is greatest in the first month of life except in Bombay City where the lower proportion of the infantile deaths under the age of one month may be explained by the fact that many mothers leave Bombay for confinement and do not return till the child (if still living) is over one month old.

The following is a brief extract from the report on Infant Mortality by the Executive Health Officer, Bombay Municipality :—

" *Bombay City.*—The number of deaths among infants under one year of age was 12,751, being 1,855 more than in 1920, 1,882 more than the quinquennial average and 3,423 more than the average of 1911-1920.

The percentage of infant mortality to the total mortality at all ages was 23·78 against 23·77 in 1920 and 19·72 in 1919. The ratio per 1,000 of live births registered was 667 against 552 in the antecedent year and 450 the decennial average.

As pointed out, the number of births registered in the City probably understates by some 6,000, the average number of infant lives at risk during the year. At the Census through confusion between the first year of life and the age 1 year, large numbers of infants under 1 year of age are returned by the parents as having entered the age period 1 to 2 years. Thus in the 1921 census for Bombay only 12,662 children were shown as under 1 year of age whereas the births numbered 19,125 in 1921.

If the infant lives at risk during the year be taken in round numbers as 25,000, that is to say, as equal to the estimated number of births, the recorded infantile death-rate would be reduced from 667 to 510 per 1,000 infants under 1 year or per 1,000 births.

Causes of death.—It will be seen that 8,902 or nearly 70 per cent. of the total deaths in infants were due to diseases of the Respiratory System, Infantile Debility and Premature Birth against 68 per cent. (7,422 deaths) in 1920. Diarrhœa and Enteritis caused 981 deaths and Malaria, Ague and Remittent fevers 254 deaths. The deaths from Small-pox and Measles numbered 77 and 66, respectively.

Quinquennial averages.—Compared with the averages of the preceding five years, Small-pox shows a decrease of 78, Measles of 71 and the group of Malaria, Ague, Remittent fever and Fever not defined of 70 deaths ; all the other causes of death show increases, the largest (1,169) being under Infantile Debility and malformation including premature birth. The excess in the number of deaths from Diseases of the Respiratory System has been due to the prevalence of Influenza, and a large number of the deaths attributed to infantile debility were no doubt primarily due to the same cause.

Of the total deaths among infants, 2,227 or 18 per cent. took place in the first week of life and 1,650 or 13 per cent. in the age period 1 to 4 weeks.

The mortality among infants who had not completed the first month of life was thus 3,877 or 31 per cent. of the total infant deaths. The number of deaths in the age groups 1 to 6 months and 6 to 12 months was 4,168 and 4,706 being respectively 32 and 37 per cent. of the total infant mortality.

The salient features of the above tabulated figures are the magnitude of the role played by debility and prematurity in the causation of death in the first 4 weeks of life and the large proportion of deaths from Respiratory diseases during the remaining 11 months of infancy.

It was shown in the Annual Report for 1920 that during the preceding 20 years the epidemic outbreaks of Plague, Small-pox, Cholera and Influenza which had raised the general mortality, had in practically every instance been accompanied by a closely parallel rise in the

death-rate among infants and that infants thus appeared to suffer almost in the same degree as adults from these diseases. The statement is again confirmed by the figures of 1921 as shown below :—

	1920.	1921.	Increase per cent.
Deaths under 1 year	10,896	12,751	17
Deaths at all ages	45,839	53,609	17

The mortality fluctuations in the number of deaths in infants and at all ages were also remarkably parallel during the year under report:—

In the first five months of the year Influenza and the Respiratory Diseases which accompany Influenza, maintained an excessive death-rate in both age periods with some assistance in March and April from Plague and Small-pox. In June the death-rate fell, with the end of the Influenza epidemic. The rains in July were accompanied by a rise in the general and infantile death-rate and the death-rate from Malaria, Ague and Remittent Fevers. With the cessation of the rains, the death-rate fell month by month to the end of the year, both among infants and among the population at all ages."

From Tables and Charts illustrating the infantile death-rate in the different sections of the City and according to caste and number of rooms occupied the following items are extracted :—

Infantile mortality amongst the principle castes are :—Hindus of Other Castes 632, Hindus Low Castes 860, Brahmins 831, Banias 470, Musssulmans 668, Indian Christians 607, Jews 384, Parsis 245 and Europeans 306 per 1,000 births registered.

"In the City as a whole and in every section except Market infantile death-rate for 1921 exceeded that of 1920 by a considerable figure. The death-rate in Market section fell by close on 50 per cent. The apparent fall is due to a rise of approximately 50 per cent. in the number of births registered in the section, a good illustration of the fallacy underlying the calculation of infant deaths on total births under the conditions prevailing in Bombay. Some of the figures are :—

	Births.		Deaths in infants.		Infant mortality per 1,000 births registered.	
	Number.	Percentage.	Number.	Percentage.	1921.	1920.
Four or more rooms ..	240	1·25	32	0·25	133·3	289·5
Three rooms	282	1·47	54	0·42	191·4	295·1
Two rooms	1,022	5·34	329	2·57	321·9	304·0
One room and under ..	14,074	73·58	11,661	91·45	828·5	631·1
Road side	33	0·17	16	0·12	484·8	400·0
Hospital	3,474	18·16	659	5·16	189·6	308·9
Total ..	19,125	100·00	12,751	100·00	666·7	552·2

The percentage of population occupying a tenement of one room and under to the total number of occupants in each class of tenement in the City by the Census of 1921 was 65·88. Of the 19,125 births registered in the year 14,074 or 73·58 per cent. occurred in families living in a single room or sharing it with others, and the number of deaths in infants in this class of population was 11,661 or 91·45 per cent. of the total infant mortality.

With a view to throwing some light on the fallacy resulting from the non-registration of births and for the comparison of one section of the City with another, figures are worked out shewing deaths under 1 year in proportion to 1,000 of the population at all ages. These show that the rate in Sewri (19·20), and Sion (15·21) still remain the highest on the list when calculated on the total population. Sewri and Sion are two of the poorest districts in the City. Other sections showing high rates are Byculla (15·10) and Dongri (15·03). The section showing the lowest rate is Fort South (1·68).

Prevention of Infantile Mortality.

The work which is being done in Bombay for the reduction of infant mortality and the detailed summary is on the lines fully described in last year's report. A steady advance in each branch is recorded for the year under report.

For enquiry into the question of the employment of women before and after confinement, the services of Dr. Barnes of the Council of the Countess of Dufferin's Fund have been lent for one year to the Government of Bombay; Dr. Barnes began her investigations on the subject under the Director, Labour Office, in consultation with the Executive Health Officer, Bombay, and other Medical Officers

(in charge of Lying-in Hospitals, etc.), and at a later date the work was also associated with this office. The results of this enquiry cannot fail to be of value to all welfare workers, voluntary and otherwise, and to such employers as concern themselves with the well-being of their women workers.

33. *Deaths by Castes or Classes.*—Deaths by Classes and by Sex in each Collectorate are recorded in Annual Form No. V Appendix IV.

34. *Deaths according to Causes.*—The following table shows the number of deaths in 1921 and the ratios per 1,000 of population arranged according to causes and contrasted with the returns for 1920 and with the mean of the preceding 10 years :—

	1921.		1920.		Mean for 10 years.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Cholera	3,521	·18	2,047	·10	19,289	·98
Small-pox	1,771	·09	3,536	·18	5,074	·26
Plague	4,672	·24	13,857	·71	56,390	2·88
Fever	226,100	11·80	266,092	13·58	362,581	18·51
Dysentery and Diarrhœa. ..	26,799	1·40	29,895	1·53	36,806	1·88
Respiratory Diseases ..	93,336	4·87	96,486	4·93	79,625	4·07
Injuries	7,888	·41	7,721	·39	7,724	·39
Other Causes	134,263	7·01	141,662	7·23	154,842	7·91
Total ..	498,350	26·00	561,296	28·65	722,331	36·88

35. Two charts are also attached showing in graphic form the total deaths and the deaths according to causes for the year in contrast with each year of the previous decade.

36. For comments on the causes of deaths *vide* Section VI.

37. *Cantonments in Native States.*—The total number of births in those Cantonments which are situated in Native States during the year 1921 was 2,155 against 2,095 in 1920, giving a birth-rate of 19·35 per 1,000 against 20·93 in 1920. There were 2,334 deaths equal to a ratio of 20·94 per mille against 2,941 and a ratio of 29·38 in 1920. The statistics are tabulated below :—

Statement showing the names of Cantonments with population and deaths from diseases for the year 1921.

Cantonments.	Population according to Census of 1921.	Area in square miles.	Average population per square mile.	Number of births.	Ratio of births per 1,000 of population.	Number of deaths from									Ratio of deaths per 1,000 of population								
						Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	Other Causes.	All Causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	Other Causes.	All Causes.
Aden Municipal Limits ..	44,000	70	629	1,049	23·84	..	2	..	269	373	..	18	577	1,239	..	·05	..	6·11	8·48	..	·41	13·11	28·16
Purely civil population of Cantonments ..	650	7·44	87·37	11	16·92	..	..	..	13	..	..	..	5	18	..	..	..	20·00	..	..	..	7·69	27·69
Baroda	2,934	1·09	2,934	54	18·40	..	..	..	19	..	..	..	11	30	..	..	..	6·47	..	..	..	3·75	10·23
Deesa	5,449	3	1,816	130	23·86	..	..	..	105	..	..	..	12	117	..	..	..	19·27	..	..	..	2·20	21·47
Mhow	31,734	6·5	4,882	187	5·89	31	7	..	158	..	..	..	161	357	·98	·22	..	4·98	..	..	..	5·07	11·25
Nasirabad	15,959	8	1994·7	556	34·84	2	1	..	197	22	44	2	120	388	·12	·06	..	12·34	1·38	2·76	·12	7·52	24·31
Neemuch	10,490	4·52	2,539	164	15·72	2	..	..	140	14	..	..	27	183	·19	..	..	13·34	1·33	..	..	2·57	17·44
Rajkot	175	·50	350	4	22·85	..	..	..	2	..	..	..	..	2	..	..	..	11·42	..	..	..	..	11·42
Total ..	111391	101·05	1003 3	2,155	19·35	35	10	..	903	409	44	20	913	2,334	·31	·09	..	8·11	3·67	·39	·18	8·19	20·94

38. *Rainfall.*—The monsoon appeared in the Bay and South Arabian Sea during the last week of May. The current continued to be feeble till the second week of June when it became more active and extended into the interior giving a few showers of rain during the second and third weeks of the month. The current, however, was very weak generally throughout June with the result that rainfall for June was much in defect of the average throughout the reporting area, except in East Khandesh.

July.—Owing to the partial and unsatisfactory June rains, the greatest apprehension was felt by the people at the commencement of the month. Signs of real monsoon outburst became apparent about the 8th. The situation, however, was not really relieved till the 16th, when came the first generally rain penetrating inland as far as Guzerat on the one hand and throughout the Deccan on the other. The rainfall during the month especially in the last week was general and sufficient and was even excessive in many parts of Guzerat, Kathiawar, North Konkan, Khandesh and in Satara in the Deccan.

August.—The fall was in defect of the average except in Khandesh, Konkan and Guzerat.

September.—The fall was excessive in Guzerat and Kathiawar especially on 2nd to 4th and 19th to 21st and sufficient in the Konkan and North Deccan. In the rest of the Deccan and Karnatak it was only fair and was very deficient in the East, in Kolhapur and the other States of the Southern Maratha Country.

Sind received an unusual ample rainfall. In the Nara Valley this was providential as it compensated for the partial failure of the canal to receive at its head the supply necessary for wet crops.

39. Prices of food-grains were high and Government continued Temporary and Provisional allowance to menial servants in lieu of war allowance during the year under report. Government servants (superior) were also granted better rates of pay in order to compensate for the situation. The shortage of rain in so many areas resulted in the continuance of local famine and scarcity and it showed its adverse effects in the public health of those districts and on prices more generally.

Mortality according to Sex (*vide* Paragraph 31).

Analysis of the incidence of deaths amongst males as compared with females shows some interesting facts: (1) Preponderance of male deaths for all ages combined appears in the statistics of each of the last 30 years with one exception —1918, the Influenza year—when more females died than males. Other facts are brought out in the graphs in the accompanying chart (for 1921). To take graph (*b*) "Male deaths per 100 females deaths as recorded". (2) Excess in male deaths is by no means constant throughout the age-periods. It is greatest at 40-50 when over 150 males died to every 100 females. Next in order are the age-periods 50-60 (146 males per 100 females), 30-40 (119) and the first year of life (118). (3) Incidence of death amongst males is in slight excess at the age-periods 1-5 and in the last period of all:—60 and upwards. (4) The excess of male deaths at 10-15 is explained by the great preponderance of males in the population living at that age-period (at the census 126 males were enumerated per 100 females; graph (*a*)). The same is the case at 30-40 and again at the age-period 5-10, when the difference, in sex population at stake, accounts for the excess of male deaths.

Graph (*c*) represents the death-*rate* of males as a percentage of the female death-*rate*, based on the actual population at each age-period, the female rate, similarly computed being reduced to 100 at each point. This graph proves what was indicated above, *viz.*, (5) That the true preference of Death is for females throughout the age-periods between 5 and 40, reaching its maximum at 15-20 when for every 100 females only 82 males are liable to die. (6) It also shows the preference of Death for males at other age-periods including the only two (1-5 and 60 and upwards) when males are in the minority in the population. The balance of preference at all ages combined is with males.

The following graphs show percentage—Male to Female:—

(*a*) of population at each age-period, 1921 Census.

(*b*) of deaths recorded at each age-period.

(*c*) of death-rate, *i.e.*, male reduced to percentage of female rate.

COMPARISON OF DEATHS AMONGST MALES AS AGAINST FEMALES

FOR THE BOMBAY PRESIDENCY 1921. (VIDEPARA 31)

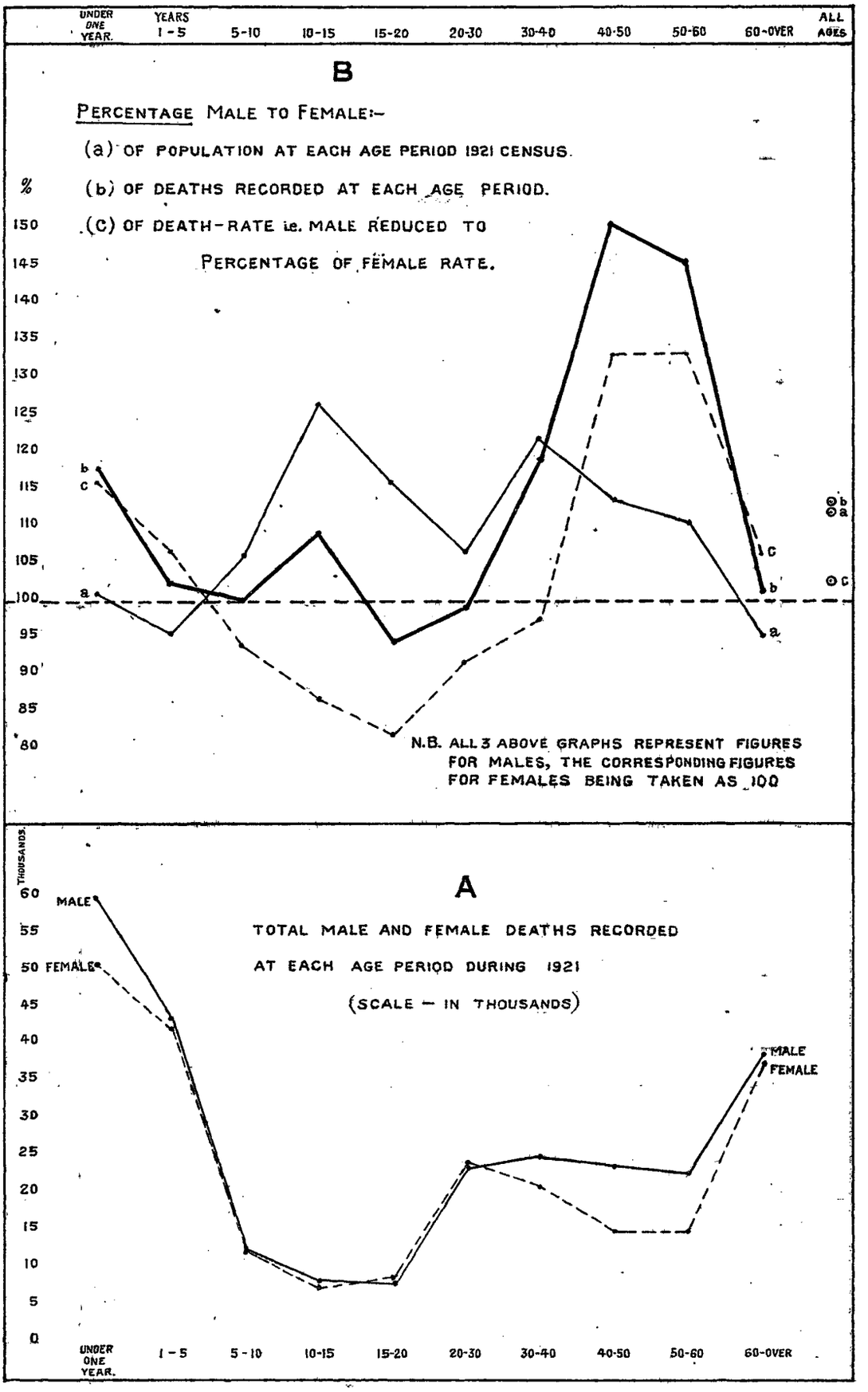
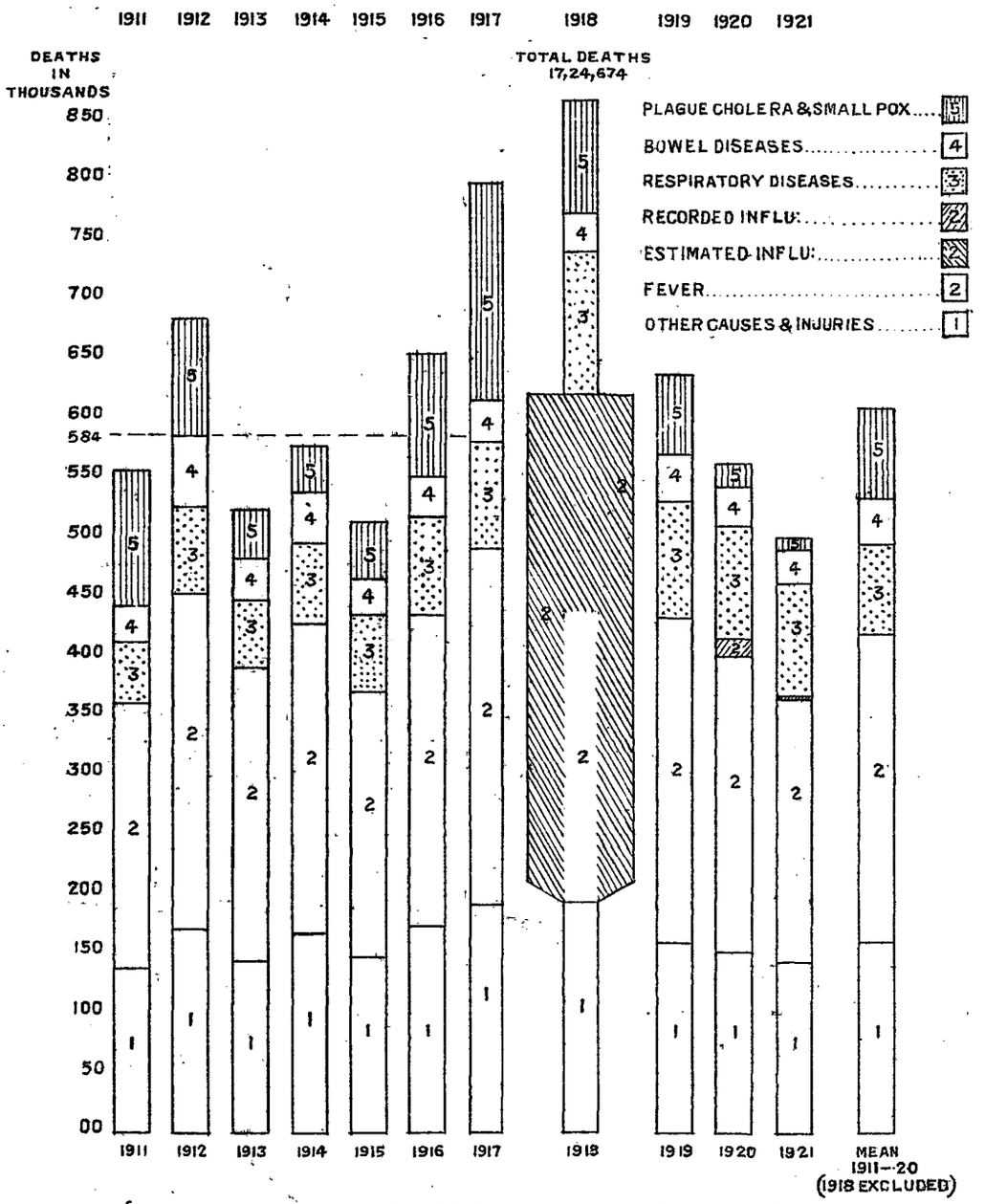
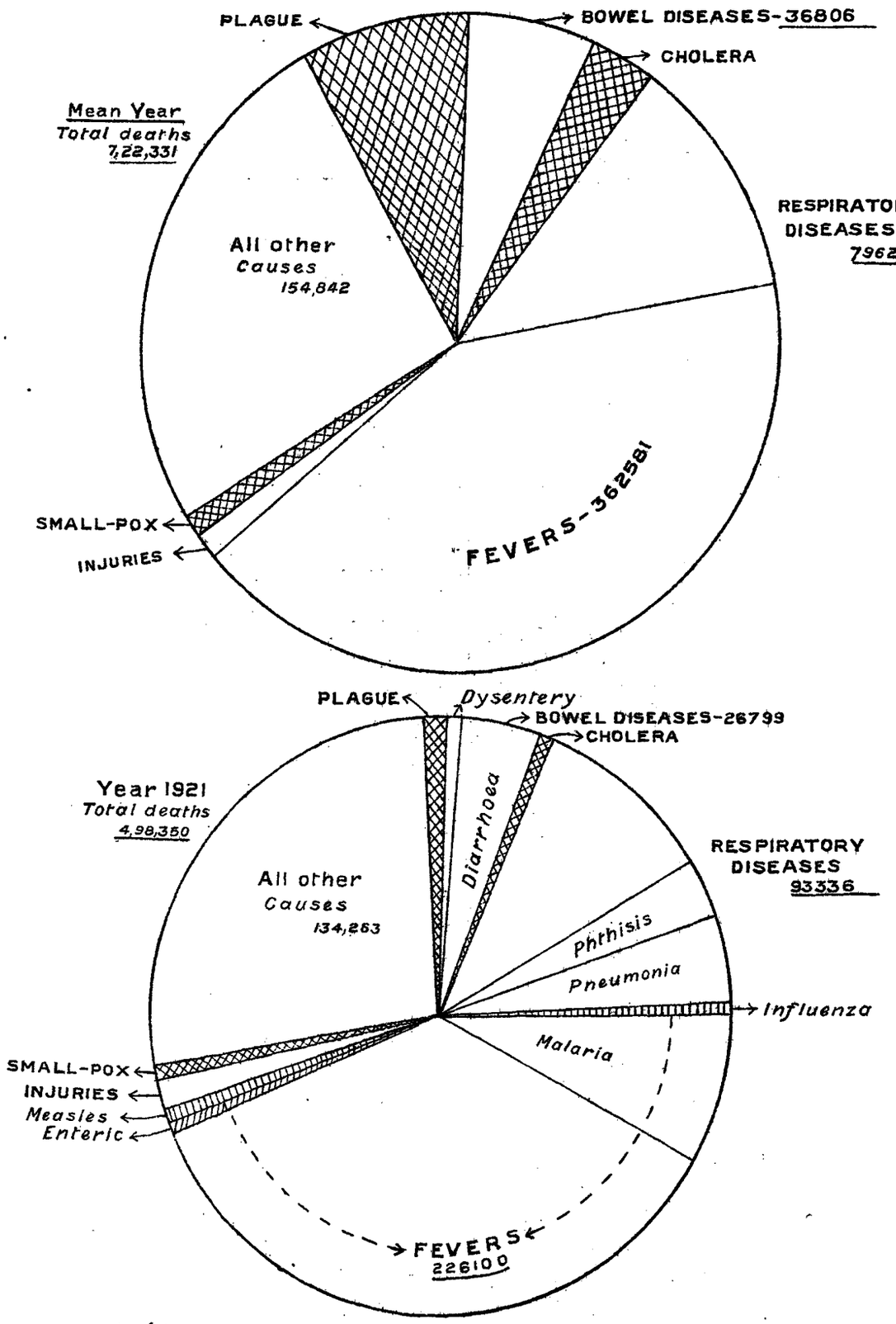


CHART SHOWING DEATHS BY CAUSES FOR EACH YEAR SINCE 1911. ALSO MEAN OF INTERCENSAL PERIOD



NOTE:— THE HORIZONTAL LINE SHOWS THE MEAN ANNUAL TOTAL DEATH FOR 1911–1916
THE FEVER COLUMN FOR 1918 IS TREBLED ITS HATCHED PORTION REPRESENTS ESTIMATED INFLUENZA

COMPARATIVE DIAGRAM OF DEATHS BY CAUSES FOR MEAN 1911-1920 AND FOR 1921.



N. B. (1) Epidemic diseases are shown hatched
(2) Division into sub-heads are not available for mean year

SECTION VI.

HISTORY OF CHIEF DISEASES.

40. *General Remarks.*—The total death figure already stated shows that the year 1921 was an unusually healthy one in advance even of 1915 the record year of the decade preceding in that respect. The fall in the actual number of deaths is apparent in the returns under practically all the separate major headings of causes of deaths. Thus, comparing them in order of their normal numerical importance with the fairly average figures for the year preceding, "Fevers" show a reduction of 15 per cent. in the actual number of recorded deaths; "Other Causes" 5·2 per cent.; Respiratory Diseases 3·2 per cent., Bowel Diseases 10·37 per cent. and the great Epidemics (Plague, Cholera, Small-pox and Influenza) show a drop of 62·2 per cent. in their combined total figures. Further comparison is seen in the Table in paragraph 34 and in the following paragraphs; also in graphic form on page 12.

On the other hand, the adverse features in the year's history of Diseases are: (1) Sind was visited by one of those exacerbations of malaria that recur at intervals of years. This is shown by the rise in mortality attributed to "Malaria" in that province despite her full share of the reduction under the main heading "Fevers". (2) The Respiratory Diseases figure although coming down year by year is still markedly in excess of pre-Influenza years. Deaths from influenza and from sequelæ of such diseases as Measles that should be recorded under those heads, go to swell the total. The "Pneumonia" constituent of this heading is in excess in the year under report. (3) Again the substantially reduced mortality from Plague, Small-pox and Influenza, etc., is partly discounted by a slight increase in the deaths from Measles and Cholera but 1920 was itself a year of exceptionally low incidence of the latter disease. (4) Increase in Relapsing Fever and its occurrence in epidemic form in parts of Bombay City and Ahmednagar District. This disease has normally a comparatively low case mortality and its full effect as a cause of sickness is not, therefore, reflected in its mortality figure—110 deaths in all. (5) There is a slight increase in the deaths attributed to child-birth.

FEVERS.

41. This heading constitutes the omnium gatherum of the village registrar and includes nearly one half of the total mortality. Besides fever the heading includes deaths from all general diseases other than from the great epidemics, injuries and well-marked cases of the other commoner diseases. Its total figures, therefore, offer one of the most reliable indices of the general health and they show that 1921 was a year of unusually low mortality.

Two lakhs twenty-six thousand one hundred deaths (119,032 males and 107,068 females) is the total recorded as due to fevers against 266,092 in 1920 and a decennial mean of 362,581. The death-rate was 11·80 against 13·58 in 1920 and a quinquennial mean of 24·36 (or 13·55 if we exclude 1918 the Influenza year).

The annual mortality attributed to fevers in previous years is given in the following table:—

Year.	Number of deaths.	Rate per mille.	Year.	Number of deaths.	Rate per mille.
1901/1910 mean ..	258,497	14·00	1917 ..	298,919	15·26
1911 ..	223,027	11·38	1918 ..	1,284,013	65·55
1912 ..	286,321	14·62	1919 ..	274,759	14·03
1913 ..	246,319	12·58	1920 ..	266,092	13·58
1914 ..	259,164	13·23	1911/1920 mean* ..	260,200	13·28
1915 ..	224,797	11·49	1921 ..	226,100	11·80
1916	262,401	13·40			

* Influenza year 1918 excluded.

42. Distribution of "Fever" deaths is shown in Annual Form No. IX. Thana (18·73) and Kolaba (18·57) are again the Collectorates showing the highest

death-rates, though these figures are an improvement on those for 1920, *viz.*, 27·45 and 23·69, respectively. The other districts that recorded high rates are East Khandesh (16·85), Sholapur (16·13), Ahmedabad (15·18), Ahmednagar (14·98), Nasik (14·54), Larkana (14·01) and Sukkur (13·65). East Khandesh, Sholapur and Ahmednagar districts did not appear in this list in last year's report.

The urban fever death-rate was 8·96 and the rural 12·48 against 10·27 and 14·23, respectively, in 1920. The highest urban death-rates in the Presidency proper were recorded in Barsi (27·86), Pandharpur (26·98), Sholapur (26·84), Yeola (23·21), Erandol (20·26), Nasirabad (18·63), Poona Suburban (18·04), Anand (17·87), Viramgaon (17·82) and Ankleshwar (17·28).

In Sind the highest "Fevers" death-rates were recorded in Kambar (22·07), Garhiyasin (21·96), Ratedero (21·38) and Rohri (16·78).

The details of sub-headings of deaths from fever are as follows :—

43. *Malaria.*—Forty-thousand nine hundred and five deaths were recorded against 33,904 in 1920. The death-rate was 2·13 against 1·73 in 1920 and the reduction is shared by all Registration Districts of the Presidency proper. Thus for Western, Central, Southern, Gujerat and Sind Registration Districts, the total deaths were 83; 9,084; 5,623; 341 and 25,279 as compared with 118; 11,029; 8,087; 427 and 13,951; respectively in 1920. Excluding Sind the malaria death-rate was ·98 compared with 1·24 in the previous year.

The urban and rural death-rates were ·94 and 2·42 respectively against 1·00 and 1·87 in 1920. The highest urban death-rates in the Presidency proper were recorded in Lonavla (9·74), Kapadvanj (7·58), Sangamner (5·10), Jambusar (5·09), Poona Suburban (4·87), Kumta (4·20) and Poona City (3·01). In the Province of Sind the highest death-rates for urban areas were recorded in Garhiyasin (21·17), Rahri (14·06), Kambar (12·61), Larkana (12·32), Umarkot (12·14), Mirpurkhas (11·10), Kotri (9·59), Tando Adam (8·33), Ratedero (7·19), Sehwan (7·01), Hala (6·42) Matiari (5·17) and Hyderabad (5·12).

The highest rural death-rates from Malaria were also recorded in Sind as the following list, by districts, shows :—

Larkana 10·24, Sukkur 10·24, Jacobabad 8·96, Karachi 8·56, Thar and Parkar 7·96, Nawabshah 7·51 and Hyderabad 6·36; and in the Presidency proper, Poona 5·47, Ahmednagar 5·26 and Kanara 4·99.

44. *Anti-Malarial Measures.*—For the treatment of sufferers twelve Sub-Assistant Surgeons were appointed on special duty—5 for Kanara, 2 for Surat, 2 for Panch Mahals, 1 for Kolaba, 1 for Belgaum and 1 for West Khandesh district and two Touring Medical Officers were employed for Surat District.

In Sind, 5 Sub-Assistant Surgeons were appointed—2 for Hyderabad, 2 for Sukkur and 1 for Nawabshah District and a Touring Medical Officer was employed in Sukkur District.

Two thousand nine hundred and forty-nine lbs. of quinine against 2,665 in 1920 was sold or distributed free in the Presidency and Sind by the District Local Boards, Municipalities and Post Offices.

The Collector of Sukkur reports :—

"The efficacy of quinine in the prevention and cure of malarial fever is now fully established, and the free distribution of the drug has popularized its use far and wide. The health of the district was good this year in view of the fact that the river inundation was high and the rainfall plentiful. This is at least in part attributable to the timely use of quinine. It has been specially remarked that the health of the patawalas and other menial staff, who have free access to supplies of quinine, was remarkably good. At the same time there is much reason to fear that the people's belief in quinine is not yet sufficiently firmly established to induce them to buy it (particularly at the present high price) and that if free supplies are suddenly stopped, the use of the drug will stop likewise, with serious results to the Public Health. Considering the incalculable but enormous increase in efficiency derived from immunity from Malaria, I have not the least doubt that it would be a disastrously short-sighted policy to require the accounts of the Department engaged in the production and distribution of quinine to balance under the tests of a chartered accountant".

45. During the year Rs. 3,52,557 were spent on anti-malarial measures against Rs. 3,22,373 in 1920. Of this sum Rs. 57,185 came from Provincial, Rs. 282,701 from Municipal and Rs. 12,671 from Local Board Funds.

The chief items in Provincial expenditure were :—

(*a*) Rs. 49,084 for the purchase of quinine, and

(*b*) Rs. 7,734 pay and allowances of Medical Officers deputed on anti-malarial duty.

The expenditure in Bombay City amounted to Rs. 62,679. Of this sum Rs. 33,051 were establishment charges and Rs. 966 contingencies ; Rs. 1,232 were spent on disinfectants, Rs. 9,342 on filling in wells or covering them with concrete and Rs. 18,088 on providing new pattern gratings and frames to storm water drains.

The mofussil municipalities spent Rs. 2,11,397 in filling up mosquito breeding grounds ; the chief amounts were Rs. 1,39,307 by the Karachi municipality, Rs. 23,457 by Sukkur, Rs. 21,013 by Hyderabad, Rs. 15,858 by Ahmedabad, Rs. 2,517 by Hubli and Rs. 783 by the Bijapur municipality. The municipalities in Poona, Broach and Surat Districts spent Rs. 6,336 ; 700 and 515, respectively, on this account.

As regards the expenditure on oil and disinfectants for the treatment of mosquito breeding grounds, Rs. 3,753 were spent by the mofussil municipalities. The chief amounts Rs. 1,764 and Rs. 734 under this head were spent by the Karachi and Ahmedabad municipalities, respectively.

Municipalities spent Rs. 3,985 on the free distribution of quinine. The largest amount Rs. 1,136, was spent by the municipalities of Kaira district while those of Broach and Poona spent Rs. 465 and 310. On the quininization of schools Rs. 886 were spent.

The District Local Boards incurred a total expenditure of Rs. 12,671. Of this more than 55 per cent. (*viz.* Rs. 6,998) were spent on the free distribution of quinine. Other items of expenditure were Rs. 3,097 on filling up mosquito breeding grounds and Rs. 2,370 on the quininization of schools.

Quinine tablets to the value of about Rs. 33,000 were distributed free by Government among the general public and school children especially in the districts of Sind and Kanara.

46. *Enteric Fever.*—Two thousand eight hundred and thirty-five deaths were registered against 2,536 in 1920 and 2,749 in 1919. For the Southern, Central, Guzerat, Western and Sind Registration Districts, the total deaths were 1,630,352, 3, 2 and 718 as compared with 1,393, 313, 38 *nil* and 659, respectively, in 1920.

The highest death-rates for urban areas were recorded in Gokak (3·10), Poona City (1·54), Hyderabad (1·35), and Nawabshah (1·08). In Bombay City 130 deaths were reported against 133 in 1920.

47. *Measles.*—Three thousand five hundred and ninety-nine deaths were registered against 2,771 in 1920 and 6,279 in 1919. In the Central, Western, Guzerat, Southern and Sind Registration Districts, the total deaths were respectively 1,129 ; 885; 834; 238 and 313 as compared with 606; 208; 128; 1,497 and 215 in 1920. In Bombay City 200 deaths were reported against 117 in 1920.

The highest death-rates for urban areas were recorded in Parola (3·64), Bhusawal (3·17), Sholapur (2·40), Ahmedabad (2·29), Chalisgaon (2·25), Dhulia (1·59), Poona City (1·52), Dharangaon (1·48), Hyderabad (1·47), Chopda (1·18), and Mehmedabad (1·13).

The Assistant Director of Public Health, Guzerat Registration District, reports "that Ahmedabad City experiences more or less severe epidemic of measles every third year, *e.g.*, 1916, 1919 and 1921. The age period chiefly affected is 0—5 years. The explanation of this recurring epidemicity is probably that the number of susceptible persons of the age period 0—5 increases." From inquiries made by that Officer, it was found that the cases of measles group themselves round schools. The attention of Ahmedabad City Municipality was drawn to these facts.

48. *Relapsing Fever.*—One hundred and ten deaths were reported from this cause, as compared with 48 during 1920. Fifty-seven or more than half were reported from Bombay City as against 43 in the year preceding. It is probable that ordinarily many cases of this disease owing to its comparatively low case mortality remain unrecognised. The distribution of deaths for this year is shewn in the Appendix IV [Form VI (*a*)]. Forty deaths were reported from Ahmednagar District where it was epidemic in 4 villages of Shrigonda taluka :—In Taradgaon 20 cases, 5 deaths ; in Banpimpri 15 cases, 1 death ; Ghogargaon 53 cases, 13 deaths and

Kamathi 12 cases, 4 deaths. The epidemic occurred in August and September in the first three. In Kamathi the infection was in November.

The Civil Surgeon, Ahmednagar, reports :—

" 16 cases were admitted to the Civil Hospital, Ahmednagar, during the months of May to December 1921 and were verified microscopically. A point of interest is that 80 or 90 per cent. suffered from epistaxis and this should be a useful point in differentiating from influenza."

Five cases were treated in the Yeola Dispensary of Nasik District as outdoor patients from October to December 1921. Two cases were treated in the West Hospital, Rajkot, Kathiawar Agency, and the diagnosis was confirmed microscopically. One case occurred in 3rd Sappers and Miners, East Kirkee. Poona City reported five deaths, Wai town 3 deaths, Satara (rural) 2, Deolali Cantonment 2 and Nasik (rural) areas 1 also recorded deaths.

49. *Kala Azar.*—This disease is practically unknown in this Presidency. No cases or deaths were reported.

Influenza.

50. 1921 is the second year of separate registration of Influenza deaths and the total number recorded for the year, 3679, and the incidence of death per mille of population, 0·19, are less than one-fourth of the figures for 1920, *viz.*, 16,690 and 0·85.

51. Sholapur is the district showing the highest mortality—361, equal to a death-rate of 0·49 per thousand of population. The total mortality from this cause for each of the other districts more severely affected and the corresponding ratios (in brackets) is as follows: Karachi 171 (·32), Panch Mahals 91 (·24), Surat 147 (·22), Ahmednagar 151 (·21), Belgaum 198 (·21), Kanara 86 (·21), Dharwar 133 (·20), Broach 46 (·15), Thana 103 (·14), East Khandesh 144 (·13), Bijapur 105 (·13), and Satara 102 (·10) and at the other end of the list Upper Sind Frontier recorded no death from Influenza.

52. In Western Registration District 964 attacks and 316 deaths were recorded as due to Influenza. Thana District returned 302 cases of which 103 proved fatal. Nasik and Kolaba Districts escaped lightly.

Amalner, Erandol and Dharangaon towns in East Khandesh District reported death-rates 1·99, 1·76 and 1·75, respectively. The death-rate in Trimbak was 1·10 and in Nandurbar in West Khandesh 1·07.

53. In Central Registration District, the death total as shown in the following table fell to 776 from 2,117 and more than half of the total was returned from Sholapur. Sholapur city recorded 311 deaths. The number of deaths of males to every 100 females was 135·48 in this Registration District.

In Satara District 45 towns and villages reported cases. The infection of this district in 10 villages and of Ratnagiri in 3 villages is attributed to Bombay.

In Ahmednagar District, the first cases in the town of Nagar occurred at Barton Hall among orphans received from other parts of the district; infection then spread to the Missionary Colony and subsequently appeared in the Sina Bridge workers.

In Ratnagiri District, 35 villages including 4 towns reported 105 deaths while in Poona District 57 deaths against 907 of the previous year were recorded.

54. In Southern Registration District, the epidemic was of a milder type than last year. Out of 2,729 cases, 522 deaths were reported. The death-rate was ·16 against 1·16 in 1920.

In Belgaum District, the 198 deaths were returned in 55 towns and villages. Belgaum town reported 9 deaths only. In Dharwar District, 64 or nearly half the deaths were recorded in the 3 large towns, namely, Gadag 29, Hubli 19 and Dharwar 16.

Kanara District returned 472 cases and the smallest number (86) of deaths in this Registration District.

55. In Guzerat Registration District also the epidemic was of much less severe in type than that of the previous year. There were 360 deaths against 3,919 in 1920.

Panch Mahals District.—All talukas except Kalol were affected. In all 20 villages, against 27 in 1920, were affected and reported 303 cases of which 91 proved fatal. The cases were grouped mostly in Dohad, Jhalod and Halol Rural Circles.

All talukas in Surat District except Mandvi, Chorashi and Bulsar were free. The total number of cases reported was 398 and of deaths 147 showing a case mortality of 36·96. In Broach District 13 villages including 2 towns were affected and 268 cases occurred of which 46 proved fatal. Broach town reported 12 deaths against 126 in 1920. Jambusar rural circle was mildly affected.

Ahmedabad City recorded 9 deaths against 64 in 1920 and Ahmedabad District was but little affected. Nine villages only showed infection. In the District there were in all 189 cases of which 42 deaths occurred. The death-rate was ·04.

56. In Sind Registration District there were 327 deaths against 552 in 1920. The epidemic was of a mild type. The case mortality on reported figures was 13·89 against 74·09 in the previous year.

Karachi District alone showed a degree of severity. There were 171 deaths of which Karachi City contributed 128 deaths against 470 (in Karachi City) in the previous year.

Upper Sind Frontier District was as noted above entirely free from Influenza. Sukkur and Thar and Parkar were reported to have been almost free. The number of cases and deaths in the remaining districts of Sind were as follows :—Hyderabad 413 cases and 43 deaths, Larkana 115 cases and 52 deaths, Nawabshah 108 cases and 39 deaths. In the last named, the infection was mostly centered in Sakrand Taluka.

57. Bombay City recorded less deaths under "Influenza" than during the preceding year, *viz.*, 1,378 as compared with 1,577. It is to be noted, however, that the total mortality for Respiratory Diseases shows a considerable increase (*vide* Table, para. 59) which indicates a recrudescence of Influenza during the year. Deaths amongst males were in the proportion of 216 to 100 deaths amongst females. Eleven deaths were recorded amongst Europeans and Eurasians. Dr. Sandilands, M.C., M.D., D.P.H., the Executive Health Officer, states :—

> "At the close of the year 1920, Influenza was assigned as the probable cause of the enhanced death-rate from respiratory diseases. This conclusion was confirmed by an outbreak of Influenza in the first month of 1921, which raised the daily mortality . . . ". "The type of the disease was mainly respiratory. Leaflets instructing the public what to do for the prevention of the disease were distributed throughout the city, and they were asked to avail themselves of the medical relief afforded at the Municipal Dispensaries and Hospitals."

58. The infected villages in Sind and Southern Registration Districts were visited by Sub-Assistant Surgeons. Stock mixtures were supplied and advice regarding the benefit of fresh air, etc., was given. Anti-Influenza vaccine was not taken advantage of by the people. Relief was also given to poor patients in shape of milk, food, etc.

59. While the figures given above are indications of the prevalence and mortality of the disease, there is reason to believe that the full toll does not yet appear under the new heading. An accurate estimate is difficult to arrive at. In the Report for 1918 an exhaustive analysis was made of the excess in deaths for that year. The excess appeared under the headings "Fevers" and "Respiratory Diseases" and was certainly due to Influenza. The estimate was a conservative one as the average taken for comparison included at least one very unhealthy year (1917). The method is not applicable to the further years of Influenza of lesser virulence. It is probable that the overplus of death from that disease is now recorded mainly under Respiratory Diseases. It is of interest to compare the excess figures of the latter over the mean for 1911-1915 as in the following table for all Registration Districts for each year since 1916. The significance of the excess in 1916 and 1917 is merely speculative—Does it mean that Influenza was present and insidiously working up in virulence ? For 1918 the excess is surely Influenza and represents only a part of it. For the subsequent years the excess may be regarded as mostly due to Influenza and to its figures are added (in column 3) the deaths actually reported as Influenza since that heading was introduced (January 1st, 1920).

Statement shewing excess of deaths from Respiratory Diseases over the mean of 1911-15. Also reported Influenza deaths and ratios of both combined per 1,000 of population :—

Years.	Gujarat Registration District.				Western Registration District.				Central Registration District.			
	Respiratory Diseases excess.	Influenza.	Total.	Ratio.	Respiratory Diseases excess.	Influenza.	Total.	Ratio.	Respiratory Diseases excess.	Influenza.	Total.	Ratio.
1916	6,239		6,239	2·21	2,766		2,766	·69	5,178		5,178	1·02
1917	7,850		7,850	2·80	3,962		3,962	·99	9,648		9,648	1·91
1918	16,248		16,248	5·79	5,663		5,663	1·42	14,203		14,203	2·81
1919	6,384		6,384	2·29	3,763		3,763	·94	7,915		7,915	1·56
1920	11,599	3,912	15,511	5·54	2,946	4,753	7,699	1·93	7,531	2,117	9,648	1·91
1921	6,684	360	7,044	2·38	2,719	316	3,035	·76	6,756	776	7,532	1·68

Years.	Southern Registration District.				Sind Registration District.				Bombay City.				Bombay Presidency.			
	Respiratory Diseases excess.	Influenza.	Total.	Ratio.	Respiratory Diseases excess.	Influenza.	Total.	Ratio.	Respiratory Diseases excess.	Influenza.	Total.	Ratio.	Respiratory Diseases excess.	Influenza.	Total.	Ratio.
1916 ..	1,709		1,709	·39	1,060		1,060	·30	749		749	·78	1,7701		17,701	·90
1917 ..	3,540		3,540	1·08	825		825	·24	2,661		2,661	2·76	28,486		28,486	1·46
1918 ..	5,519		5,519	1·69	2,762		2,762	·80	13,104	3,847	16,951	17·59	57,499	3,847	61,346	3·13
1919 ..	670		670	·21	2,434		2,434	·69	15,286	19,42	17,228	17·88	36,452	1,942	38,394	1·96
1920 ..	759	3,779	4,538	1·39	1,355	552	1,907	·54	10,115	1,577	11,692	12·14	34,305	16,690	50,995	2·60
1921 ..	Nil	522	522	·16	2,552	327	2,879	·88	13,218	1,378	14,596	12·71	31,155	3,679	34,834	1·82

60. *Cerebro-Spinal Meningitis.*—This disease broke out in Dhulia Prison in October. There were 15 cases and 14 deaths up to the 2nd May 1922. Karachi city and a regiment in East Kirkee reported one case each. Measures were taken to prevent the spread of infection and no cases were recorded from amongst the general population of the Presidency. A considerable number were, however, reported throughout Kathiawar Agency.

Respiratory Diseases.

61. An outstanding feature of the vital statistics is the increase in the rate of death under this head from the mean figure of 62,181 during the first half of the past decade to 79,882 ; 90,667 ; 119,680 ; 98,633 ; and 96,486 in the successive years of the last half. Further remarks on this point are given under Influenza. The rate for the year now under report is 4·87.

The total and per-thousand-of-population mortality for previous years is shown in the following table :—

Year.	Number of deaths.	Rate per mille.	Year.	Number of deaths.	Rate per mille.
1901/1910 mean ..	57,723	3·12	1917 ..	90,667	4·63
1911 ..	51,470	2·63	1918 ..	119,680	6·11
1912 ..	70,712	3·61	1919 ..	98,633	5·04
1913 ..	59,418	3·03	1920 ..	96,486	4·93
1914 ..	65,941	3·37	1911/1920 mean ..	79,625	4·06
1915 ..	63,364	3·23	1921 ..	93,336	4·87
1916 ..	79,882	4·08			

The highest death-rates were returned from the Collectorates of Kaira (9·44), Surat (8·64), Ahmedabad (8·43), Broach (8·10), Ahmednagar (6·61), Poona (6·58), Nasik (5·19) and Ratnagiri (4·45) and this was practically the order of severity stated in the history for 1920. East Khandesh (4·33), Karachi (3·23), Panch Mahals (3·18) and West Khandesh (3·03) follow in order of incidence of death. Bombay

City recorded a death-rate of 20·93 from this cause as compared with 21·02 in the year preceding.

For rural areas the death-rate was 3·26 against 11·56 for urban areas as compared with 3·43 and 12·65, respectively, in 1920. The highest death-rates for urban areas were recorded in Poona City (22·45), Ahmedabad (16·47), Kirkee Cantonment (15·89), Surat (13·73), Hyderabad (13·56), Nagar (12·31), Matiari (11·44), Broach (10·63), Kapadvanj (10·41), Jambusar (10·18) and Trimbak (10·14).

62. *Phthisis.*—16,271 deaths from Phthisis were registered equal to a death-rate of ·85 for the Presidency as a whole. The corresponding figures for 1920 were 17,450 and ·93, respectively. In Central, Southern, Western, Gujarat and Sind Registration Districts, the total deaths attributed to this cause were 5,381, 2,225, 2,074, 4,476 and 668 compared with 5,238, 2,437, 2,199, 5,298, and 672 in 1920, respectively.

In Bombay City the deaths registered as from Phthisis, 1,447, were equal to a death-rate of 1·26 compared with 1,606 or a death-rate of 1·67 in 1920.

The urban death-rate was 1·57 and the rural ·68 against 2·02 and ·67 in 1920. The highest death-rates for urban areas were recorded in Hyderabad (4·05), Surat (3·75), Kapadvanj (3·52), Dakore (3·50), Poona City (3·47), Chiplun (3·45), Bijapur (3·36), Bhiwandi (3·28), Dholka (3·20), Nagar (3·17), Vengurla (3·14), Thana (3·12), Belgaum (3·12) and Nasik (3·02).

The highest death-rates for rural areas were recorded in the District of Ratnagiri (2·66), Kaira (1·92), Kolaba (1·59), Ahmedabad (1·35) and Surat (1·06).

The Assistant Director of Public Health, Western Registration District, remarks:—"This year, as last year, the mortality from phthisis is higher in the Konkan districts than in those above-ghats. The labourers employed in Bombay Mills are mainly drawn from Thana and Kolaba. These mill-hands are necessarily much more exposed to the chances of infection than the labourers of the country who live and work in the open air and they return to their homes in Thana and Kolaba Districts to spread the infection." The age-period 30 to 40 showed the highest mortality.

These remarks would apply also to Ratnagiri District from which many workers are attracted to Bombay Mills.

The Assistant Director of Public Health, Southern Registration District, reports:—

> "Phthisis is more prevalent in the sea-coast than in above-ghat Talukas of the Kanara District. The sea-coast of the Kanara District is in close communication with Bombay City, where phthisis is always prevalent. Emigration to Bombay for work in mills, etc., is common. Natural conditions of Kanara are such as lead to great prevalence of malaria. Malaria by the enfeeblement of the constitution which it produces, prepares the way for consumption and Kanara people, accustomed to live in huts surrounded by plenty of open space, come into Bombay City into the utterly different environment to live under insanitary conditions in chawls."
>
> "These villagers, higher susceptible to Tuberculosis infection as they are, fall victims to consumption, and when they become very ill, almost invariably return to Kanara, since they have the greatest horror of dying away from their homes. Generally these are advanced cases of phthisis, and they spread the infection not only in their villages and in their course of their journey by coasting steamer by which they return home but also on the coasting boats. On the sea-coast of the Kanara District Gokarn town circle invariably returns a very high phthisis death-rate. This year it is 2·05. Be it noted that Gokarn is a large pilgrim centre, where housing conditions are inadequate and unsatisfactory and pilgrims live under conditions of overcrowding and lack of ventilation. The annual fair at Gokarn brings large bodies of people together and provides the conditions for increased contact and spread of infection."

63. *Tuberculosis Institutions.*—In May 1921, an Anti-Tuberculosis dispensary was opened in Karachi. It is the only institution of the kind in the province of Sind.

The dispensary is in charge of a special medical officer and staff and is under the control of the Karachi Municipality. Government contributes a grant-in-aid. The staff includes two health visitors. The institution promises to be popular and very useful.

At Panchgani, there is a Tuberculosis Sanatorium transferred to spacious grounds there from Poona in 1914. There are 14 blocks of buildings and a full medical, nursing, compounding and catering staff. Middle and poor class patients of both sexes are received. The Medical Director reports (as is usual for such institutions) that most of the cases are in the "moderately advanced" stage on arrival. During the year 1921 patients treated were 74.

A great advantage of these institutions is the knowledge acquired by the patients of how to prevent the infection of others.

There is a Tuberculosis Hospital at Vengurla under the charge of the American Presbyterian Mission.

64. *Pneumonia.*—23,677 deaths were registered equal to a death-rate of 1·23 for the Presidency as a whole. The corresponding figures for 1920 were 20,067 and 1·02 respectively. On reviewing the figures according to Registration Districts, it is found that Gujarat with 3,436 deaths contributed a high proportion as was also the case last year when 4,125 were returned. The Central Registration District and Sind also returned high figures, *viz.*, 2,307 and 2,653, as compared with 2,103 and 1,330 for the previous year. For the Western and Southern Registration Districts the total deaths were 436 and 123, respectively, compared with 484 and 285 in 1920. In Bombay City 14,722 deaths were registered equal to a death-rate of 12·81 against 11,740 and 12·19 respectively in 1920.

In the Western and Southern Registration Districts for all 3 years since the introduction of Pneumonia as a separate sub-head, the proportion of the total respiratory diseases deaths returned under that head has been very small. In Sind on the other hand ½ of that total are referred to the sub-heading pneumonia.

The highest urban death-rates were recorded in Poona City (14·36), Matiari (8·63), Kirkee Cantonment (8·01), Hyderabad (7·09), Mirpurkhas (6·26), Surat (6·20), Tatta (6·14), Nawabshah (6·14) and Kotri (5·28).

Dysentery and Diarrhœa.

65. 26,799 deaths were recorded, of which 14,672 were males and 12,127 females against 29,895 in 1920 and 36,806 the decennial mean. The death-rate was 1·40 against 1·53 in 1920, 1·75 the mean of previous five years and 1·88 the mean for the decennium.

The number of deaths registered under Dysentery and Diarrhœa in previous years is as follows:—

Year.	No. of deaths.	Year.	No. of deaths.
1901—1910 mean ..	52,919	1917	36,321
1911	31,549	1918	32,058
1912	57,039	1919	38,317
1913	34,021	1920	29,895
1914	42,961	1911—1920 mean ..	36,806
1915	31,707	1921	26,799
1916	34,187		

The urban death-rate was 2·30 and the rural 1·18 against 2·32 and 1·37 respectively in 1920.

The decrease in the death-rate under this heading noted in last year's report in the case of Poona City, Kirkee Cantonment and Gokarn shows further progress, the figures for those towns being respectively 3·16, 3·26 and 2·29 as compared

with their quinquennial figures of 4·59, 4·66 and 7·05, respectively. The Nasik town figure has fallen with the cessation of the Sinhast Festival to 2·69 as compared with 7·06 in the year preceding. On the other hand, Dakore and Islampur towns show a further increase to 4·40 and 2·65 as compared with 3·08 and 2·24, their respective rates for the five years preceding.

66. *Dysentery.*—Under this separate sub-heading, 4,666 deaths were registered against 5,329 in 1920. The death-rate was ·24 against ·27 in 1920. The urban death-rate was ·60 and the rural ·16 as compared with ·62 and ·20, respectively, in 1920. Six towns returned death-rates above 1 per 1,000, *viz.*, Borsad (4·71), Gokarn (2·17), Dakore (1·87), Chiplun (1·27), Malwan (1·04) and Kurla (1·04).

67. *Diarrhœa.*—22,133 deaths were recorded against 24,566 in 1920. The death-rate was 1·16 against 1·25 in 1920. The urban death-rate remains at the same figure 1·70 as in the previous year, while the rural rate has fallen to 1·02 from 1·17. Eight towns returned death-rates above 2·5 per 1,000, *viz.*, Pandharpur (6·11), Nasirabad (3·36), Barsi (2·90), Jalgaon (2·74), Islampur (2·65), Kirkee Cantonment (2·63), Poona City (2·60) and Dakore (2·53).

68. A chart showing effects of piping water-supply in diminishing infant mortality and deaths from Dysentery and Diarrhœa in Sholapur City is added as Appendix III (a).

CHOLERA.

69. The number of deaths recorded from cholera was 3,521, an increase on the preceding year's very low figure 2,047, but considerably below the decennial mean of 19,289. The death-rate was ·18 against ·10 in 1920, a decennial mean of ·99 and a quinquennial mean of 1·01.

The following table gives the deaths recorded each year for the last 21 years :—

Year.	No. of deaths.	Year.	No. of deaths.
1901	13,600	1911	5,817
1902	3,229	1912	64,505
1903	1,825	1913	5,134
1904	13,156	1914	17,779
1905	5,396	1915	377
1906	46,119	1916	19,841
1907	7,656	1917	17,003
1908	1,759	1918	8,834
1909	28,714	1919	51,551
1910	3,694	1920	2,047
1901—1910 mean ..	12,515	1911—1920 mean ..	19,289
		1921	3,521

Details for all districts are given in Annual Form No. VII.

70. The history of the disease is similar to that for 1920. Thus although deaths were reported from all districts except Kanara, Nawabshah and Upper Sind Frontier, epidemicity was mostly localized to East and West Khandesh, Sholapur, Panch Mahals and Karachi Districts. Again, the first half of the year recorded only 210 of the total deaths and these mostly in one district—Panch Mahals. August and September were the months of greatest severity.

A virulent epidemic at a pilgrimage in Ujjain (Central India) had considerable influence in importing infection into this Presidency and the first important outbreak on 23rd May in Dohad Town, Panch Mahals District, was traced from there. Ujjain pilgrims also brought the disease to Nasik—a matter for anxiety as the Sinhast Festival in that area was still in progress. Fortunately the sanitary organization for that event averted the serious consequences to be anticipated.

Cholera was severe in many parts of India during the year. Another great pilgrim centre—Puri in Bihar and Orissa—was badly affected during its festivals. A good deal of the infection of this Presidency is attributable to such foci.

71. To take the Registration Districts separately : Bombay City returned 66 deaths, mostly in July and August, against 119 in 1920.

72. Guzerat Registration District recorded 196 (against 2 in 1920), the Panch Mahals District alone being accountable for 143 of the total, and of the number 70 were reported from Dohad Taluka and 58 from Dohad town.

73. In the Western Registration District, 1,870 deaths were reported against 123 in 1920, East and West Khandesh Districts being the chief sufferers. In East Khandesh the disease appeared in 22 urban and rural circles and was reported from 129 villages. 2,791 cases were reported as yielding the total of 1,203 deaths or a percentage of deaths to attacks of 43·10. Jalgaon Taluka was the first to report infection on 30th May. The talukas most affected were Amalner, Chalisgaon, Erandol, Jalgaon and Pachora, and amongst towns Parola, Chalisgaon, Erandol and Amalner were the most infected. The disease appeared in the latter town on 7th June and spread to villages of West Khandesh in which district 8 registration circles and 78 villages eventually reported cases.

The totals of cases and deaths (in West Khandesh) were 895 and 379 equal to a case mortality of 42·35. The earliest cases (7th June) in the head-quarter town Dhulia were observed amongst the Bhil inhabitants who are stated to have used fouled collections of rain water for drinking purposes. The epidemic in West Khandesh came to an end on 15th October 1921.

74. In the Central Registration District cholera was less severe than in the previous year, 849 being the total of deaths as against 1,437. The heaviest mortality occurred in the Sholapur District, which returned 535 deaths. Cholera was limited to Poona District in the beginning of January, continuing from the previous year's epidemic. Other districts affected were Ahmednagar, Satara and Ratnagiri.

In Satara District, infection appeared in Pusegaon, Khatav Taluka, in July (whence it spread to three other villages, one of them in Man Taluka) and in Koparde in Satara Taluka, the medium in both cases being returned pilgrims from Pandharpur.

In Sholapur District, Barsi Taluka was badly affected—477 cases and 230 deaths. In the case of Barsi Town, cases were practically confined to the users of a well polluted by the storm-water from the road and surrounding area.

75. The Southern Registration District also recorded fewer deaths—111—from cholera as compared with 376 in 1920. In March there were two imported cases in Belgaum Town and in April one case occurred at Saundatti Town of the Belgaum District and one in Hubli Town of the Dharwar District. The disease did not approach epidemic severity till the end of July.

76. In Sind Registration District, 429 deaths from cholera were recorded against *nil* in 1920. Of that total only 5 were recorded during the first half of the year, *viz.*, Karachi City 4 and Sukkur Taluka 1. Preventive measures were promptly applied. In the case of Sukkur (Arain village) the Cholera Instructor was despatched to sterilize the wells in and around the village. Only 5 sporadic cases and 1 death occurred in Arain village.

The first of the cases in Karachi City was a pilgrim arrived from Bhan, Larkana; later on in June, 3 other sporadic cases occurred in the city and subsequently to those a contact case—all fatal. The epidemic assumed severe proportions in August and September during which months 122 deaths of the total 160 recorded in the city occurred. The Assistant Director states :—

> "The main cause of cholera in Karachi and in Sind generally during the year under report is ascribed to the very large number of poor and destitute Makrani immigrants. Owing to the famine conditions, prevailing in Makran coast some thousands of poor Makranis immigrated to Karachi. Their presence was looked upon with certain amount of anxiety. The camp was carefully watched by the Health Department, Karachi Municipality. The condition of these people generally was terrible. Some sort of relief was, however, given to them by raising public subscriptions, etc., by few public spirited citizens of Karachi in forming themselves into a sort of Relief Committee of Makran immigrants. The other indirect cause was the heavy rains and floods which left people destitute. As for action taken: the Assistant Director wrote to all the Collectors about the impending danger. The whole water-supply was carefully looked after. Cholera Instructors were detailed on special duty where necessary. The Assistant Director visited the affected places and gave necessary instructions, etc."

The Health Officer, Karachi Municipality, reported in September 1921 that—

"The cholera epidemic in Karachi is largely due to the epidemic of flies which is considerably prevalent at present in the city. After the recent exceptionally heavy rainfall, the flies have increased in such number as was never experienced during my ten years' service in Karachi. As a result, diarrhœa, dysentery, choleric diarrhœa and such other diseases are more prevalent at present than true cholera, particularly amongst children and infants."

77. *Preventive Measures.*—Severely affected districts were brought to the notice of the Collectors by the Assistant Directors of Public Health. The stock of cholera treatments supplied to village officers was utilized, cholera leaflets were distributed and the permanganating or sterilization of drinking water was recommended. The services of Instructors in the purification of water-supplies were utilized to the fullest extent in sterilizing water-supplies in and around the affected villages and in instructing the people of infected villages in matters relating to prevention of the epidemic disease and in rudiments of hygiene and Public Health. One Assistant Surgeon was deputed in East Khandesh on cholera inoculation duty. Some people took advantage of inoculation while the epidemic showed a tendency to spread, but as soon as it commenced to abate, the people were reluctant to get themselves inoculated.

Sterilization of water-supplies.—The scheme directed against the spread of cholera (Government Order, General Department, No. 7229 of 7th July 1920) was practically brought to a close by the end of November 1921 owing to financial stringency. Two only of the Instructors—one in the Central and the other in the Guzerat Registration District—were retained on a temporary basis over the end of the year.

In Sind, the Instructors being qualified medical men, proved to be extremely useful. They visited 46 talukas (out of 61 total in Sind), and 195 central places. In these talukas they gave 294 demonstrations. Total number of people that attended these demonstrations and received instructions was 16,116. Of these 5,820 were Government officials, 207 were municipal and Local Board officials and 10,089 private persons.

Immediately on the appearance of cholera in Kotri in Karachi District the Instructor was detailed there to attend to the water-supply in and around infected places and to deal with the epidemic generally. During the period on such special duty, the Instructor regularly inspected markets and food stuffs personally, supervised the disinfection of infected houses, organized public lectures to propagate the knowledge of preventive measures and helped the local bodies generally. He also medically attended some of the cholera patients and in few cases (in Kotri) succeeded in giving anti-cholera vaccine to the relations and other contacts.

The Instructors in the Registration Districts of the Presidency were made equally useful in and around epidemic centres when necessary besides giving like demonstrations in course of regular tours. Close on 14,000 persons altogether received instructions from them.

Plague.

78. The mortality from Plague for the year is by a long way the lowest since the disease first established itself in this Presidency. The toll of deaths recorded is 4,672 as compared with 13,857 in 1920 and the death-rate was ·24 or one-third that of the previous year and only a point above one-fifteenth of the quinquennial mean (3·53). The annual total for each year since 1900 is given below :—

Year.	No. of deaths.	Year.	No. of deaths.
1900	33,196	1911	10,399
1901	128,259	1912	28,984
1902	184,752	1913	25,288
1903	281,269	1914	20,060
1904	223,957	1915	43,824
1905	71,363	1916	79,507
1906	51,525	1917	162,874
1907	93,609	1918	79,478
1908	27,345	1919	9,626
1909	24,316	1920	13,857
1910	25,043	1921	4,672

79. *Distribution.*—It would be profitless to indulge in optimistic review as to immunity acquired by the population, decline in virulence or any such points bearing on the future of the disease that may, to some, seem justified by the above and the details in Annual Form No. XII. A reference to the latter will shew that infection was more widespread than would be expected from the unprecedented small total of deaths. In most places even among those affected, however, the mortality rate was less than one-tenth per cent. of the population. Three districts in addition to Bombay City were responsible for three-fourths of the total. They were Dharwar (1,255), East Khandesh (868), Satara (800).

In Dharwar district where all talukas except Nargund Peta were affected and Ranebennur town suffered severely—there were 1,255 deaths which works out to a plague mortality rate of 1·21 the highest for the whole Presidency though very much less than the rates in the same district in the previous year 4·01 and mean for the quinquennium 4·51.

In Belgaum district 4 talukas were affected and the total deaths were 202 equal to a death-rate of 0·21 as compared with 1·20 last year and a five year mean of 5·19.

80. For the Western Registration District, the total is 1,494 deaths against 4,995 in 1920, the corresponding death-rates being 0·38 and 1·25. The quinquennial mean death-rate was 3·63. The disease was present in all Collectorates of this Registration District and that throughout the whole year.

East Khandesh was free from June to August but recorded for the remaining months of the year 868 deaths against 3,243 in 1920. Chopda town reported 592 of the deaths, sixteen other villages, of a total of 1,478 villages in the Collectorate, contributing the remaining 276. Districts less severely affected were West Khandesh, Thana, Bombay Suburban and Kolaba. Of the larger towns—Dhulia remained quite free from plague a result attributable to an active rat campaign in which 27,234 of the rats were caught and destroyed. Malegaon also had carried on a de-ratting scheme—total catch 35,783, and its incidence of plague was blank all through the year.

The Assistant Director of Public Health, Western Registration District, says in his report :—

> "The area in the neighbourhood of Nasik and Trimbak where the Sinhasta festival was held was particularly watched with a view to prevent the further spread of the disease. No cases appeared till June but 243 deaths were recorded up to the end of the year. An outbreak of plague was reported at Ghoti, Taluka Igatpuri, and it was inspected. Plague made its appearance in the village on the 10th of July and between that date and the 26th of that month there were 25 attacks. Cases started occurring again from the 1st August and between the 1st and 26th of August there were 69 attacks. Ghoti is an important grain centre and grain from here is sent out to a large number of villages in the Nasik, Thana and Ahmednagar Districts. It was probable that Ghoti got infected with plague through grain imported from Bombay."

81. In the Central Registration District 819 deaths were registered against 2,737 in 1920. The death-rate was ·18 against ·54 and the mean of previous five years was 5·61. The highest mortality occurred in Satara district, *i.e.*, 800 against 2,678 in 1920 equal to death-rate for this district of ·78 and 2·48 respectively the quinquennial mean being 39·98. The talukas of Satara worst affected were Koregaon (3·50), Walwa (2·38) and Tasgaon (1·49).

In Satara city the rat-trapping operations of 1920 were kept up for two months of this year. Five hundred and fifty traps were used and 3,700 houses were supplied with traps in routine ; only 3,106 rats were destroyed but the city remained free from plague. Jakatwadi and Gadkaralli adjoining Satara city were also trapped and 185 rats were killed. The operations were discontinued at the end of February 1921 for want of funds.

82. In Mahableshwar the campaign against rats of the previous year was continued with the following result as reported by the Superintendent of Mahableshwar :—

> "The population of the town as per Census of 1921 is 5,000. The town (including outlying bungalows and the village of Ranjanwadi) is divided into 7 wards, and the traps are issued daily to each successive ward so that each ward is trapped once a week. 'Wonder' and 'Break-back' traps are used. Dry cocoanut is used as bait.

Average number of traps set daily was 103·4 as against 87·7 during the year 1920.

Average number of houses in which traps were usually set was 48·2 as compared with 45·2 in 1920.

Average number of rats caught per house was 3·0 as against 4·5 during the year 1920.

The number of rats destroyed during the year under report is very small—1806, as compared with 2,675 rats destroyed during the year 1920. This is chiefly due to the fact that almost all the traps were very old and rats could escape from the traps after entering them. Two hundred good traps have been recently obtained from the Collector of Satara and are being used now.

Plague broke out in the town in the month of December 1921. There were 7 cases and 1 death from plague from 6th to 31st December 1921. Number of persons inoculated against plague at Mahableshwar was 291. There were no cases of plague among the inoculated people."

In Poona and Ahmednagar districts 11 and 7 deaths, respectively, were recorded and Poona City reported only 6 deaths. Sholapur and Ratnagiri districts were entirely free.

83. The greater part of Guzerat Registration District was free from plague throughout the year and deaths occurred in three districts only—9 in Surat, 2 in Kaira and 3 in Ahmedabad—total 14.

84. Sind Registration District enjoyed immunity all the year round with the exception of Karachi City and Tando Adam, a town of Nawabshah district, which contributed 54 and 1 death, respectively. Sixty-one inoculations were performed in Karachi City.

The total number of deaths recorded in Bombay City was 807 as compared with 281 of previous year.

Preventive Measures.

85. *Rat-destruction.*—The assistance to be expected from the public in this economic as well as anti-plague measure is not forthcoming in all places. To begin with, it must be fully effective and put into force long before the plague season is due and like all work in preventive medicine its necessity at that stage is not fully appreciated by the average Indian citizen and often only receives half-hearted support by members of the body responsible for his welfare in health matters. Further, there are many householders who object for religious, superstitious or other reasons to the placing of rat traps in their houses.

The special operations in Belgaum and Dharwar districts were, however, actually continued though on a reduced basis. An account is given in a later paragraph.

Rat destruction elsewhere was carried out in Dhulia and other towns as stated above.

86. *Inoculation.*—One temporary Assistant Surgeon and five Sub-Assistant Surgeons were employed on inoculation duty. They visited 39 towns and villages and inoculated 4,986 persons. Inoculation was also performed by Civil Surgeons, Officers in charge of Hospitals and Dispensaries, Medical Officers in charge of Prison Hospitals, Private Medical Practitioners and others.

The total number of persons inoculated during the year under report was 39,208, 37,582 in British Territory and 1,626 in Native States compared with 49,117 in the previous year.

By districts the numbers of operations were:—11,334 in Dharwar, 2,923 in Ahmednagar, 1,624 in Bijapur, 922 in Thana, 822 in Kanara, 757 in Satara, 705 in Nasik and 560 in East Khandesh. In the towns of Haveri, Ranebennur and Gadag of Dharwar district, 2,541, 1,988 and 1,230 inoculations were done, respectively, and in Bombay City 17,471 (as against 4,518 in the preceding year). In the Jails 11,595 inoculations were performed of which 6,130 were in the Common Prison, 2,923 in Visapur Deccan Gang and 1,624 in Bijapur.

Eighteen cases of plague from amongst persons inoculated in the Bombay Presidency were reported. Nine, including three of the total of four, fatal cases were attacked within 14 days of inoculation.

87. *Plague Prevention Laboratory.*—Dr. Chitre with his staff continued his investigations regarding rat-infestation of the Bombay Port Trust area and vessels in dock until October under the direction of the Director, Bombay Bacteriological Laboratory, Parel. His report dealing fully with the question including the efficacy of the anti-rat measures in force in the Docks and the modifications he would recommend was submitted to Government under this Office No. P.L.G. 10—7813 of 18th November 1921. While engaged in the above special duty in Bombay, he found time to continue some of his general investigations. Thus, the efficacy of a number of rat poisons as compared with Barium Carbonate was tested. The result is embodied in the Second Report on methods of plague prevention published in the Indian Journal of Medical Research. He assisted Major J. C. G. Kunhardt, I.M.S., in writing up two Reports (published in the same Journal) of Plague work in Poona, Satara, Ahmednagar and Sholapur. A course of practical instruction in rat work was given to a class of the Sanitary Inspectors serving in the Bombay Municipality.

Dr. Chitre also assisted with his expert advice in disposing of a number of references on his special subject and he rendered such general assistance in the routine Bacteriological work at Parel as the Director required of him.

The charge of the Plague Prevention Laboratory at Poona was held by Dr. Gandhi, D.P.H., in addition to his own duties from October to the end of the year, Dr. Chitre being on leave.

88. *Plague Operations in Belgaum and Dharwar Districts.*—The operations as reported on in last year's Annual Report were continued in their full scope up to March 31st and thereafter on a restricted basis so as to keep expenditure within the sanctioned limit of Rs. 50,000. On receipt of orders to close down, all executive work ceased from October onwards.

Dr. C. Strickland, M.A., B.C., remained in charge till the final closure of the scheme. The following extracts from his report submitted separately to Government may be given as a summary of the work done:—

"The scope of the operations was much restricted after March by the curtailment of the funds allotted, the effect of which was that all trapping work ceased as being too expensive and reliance placed upon poison baiting only.

All the continuous trapping in the big grain centres had to be stopped except in such of them as had been marked down as likely to 'carry-over' plague into the 1921-22 plague season, while all efforts were devoted to attempting to prevent 'carrying over' in those places which had been marked down as likely to do so.

It was thought possible that by using these methods endemic plague could be completely eradicated in the two districts and the risk was taken that these would not be reinfected from outside.

The various caregories of places which were actually marked down for operations were as follows:

The work was conducted in all in so far as material and the reduced organisation caused by curtailment of funds allowed:—

1. *Carrying-over places.*—A list of 60 'carrying over' villages shewing dates of infection during the previous off-season of plague and dates during which operations were in action, shews that the recrudescence of the disease in the 1921 plague season which commenced in July was averted in all but three, *viz.*, Kalkeri, infected at the end of March was operated immediately but without avail, while Domnal and Alur infected in May were also ineffectively operated in.

It may be concluded from this and last year's experience that if a place becomes infected so late, carrying-over cannot be prevented. The writer has pointed out in a paper addressed to the Scientific Advisory Board that the obvious thing to do is to prevent places becoming infected so late as this, and this he thinks can be done.

The results apart from these three places appear very satisfactory. Of course it may be urged that this may be attributable to the year not being a bad one for plague, but from an anlysis made by the writer of the course of the last seven years epidemics in these districts, it is not quite clear that a bad year causes any considerable amount more of carrying-over than a good plague year.

The object of the work in these places was primarily, assuming them to be sterile, to prevent the importation of plague into them from a distance. When any become infected it was operated in for other reasons.

2. *The big grain centres.*—Fifteen grain centres were operated in by continuous trapping (up te end of March) and by poison baiting as indicated.

In the sequel Haveri was the only place which became reinfected in the plague season.

3. *The places laid down in Government Resolution No. 10858 in which operations were to be conducted in the event of plague in the same taluka in the off-season.*—In this category 87 places were indicated for operation. They were mostly Bazar villages and particularly subject to infection for this reason. The nature of work ordered was controlled poison baiting and intensive trapping for some period every month.

Of these places two only Alur and Hangal both in Hangal taluka were the only ones that became infected in the plague season.

4. *The same class of place but exposed to infection during the plague season.*—Owing to lack of funds this class of place was not operated in.

5. *Other selected places which came within the range of infection.*—During the year, the following places were put down in this category. It became more and more evident that this class composed the key to the situation in addition to the Bazar places mentioned in section (3) above.

Dr. Strickland's further discussion at this point may be abbreviated as follows :—

(*a*) For the eradication of plague, it is essential that no place shall carry infection over the off season.

(*b*) If a place shows the presence of infection after March (onset of epidemic being expected in June) no efforts at sterilizing begun so late will be successful however good the methods may be and however small the place may be.

(*c*) The only way to prevent carrying-over is to adopt preventive measures early and in all places which have trade or social intercourse with an infected place and particularly in the Bazar places (heading 3 above).

Kudchi in Belgaum taluka and Jamboti in Khanapur Taluka of Belgaum District became infected in the plague season. Kudchi, however, was only operated in once three to four months before it developed plague ; Jamboti was operated in May, but only developed a few cases.

6. *Places in Native States.*—Practically no work was done in this class of place, except continuous trapping in Shahapur for the first three months of the year. There was no plague in Shahapur subsequently.

7. *Infected places.*—Fifteen places were operated in on receipt of report of their becoming infected."

Conclusion.

Last year the writer was able to point out that in each class of place those which had been operated in showed much more satisfactory results than those which had not been operated in. The results were most encouraging. This year such satisfactory results cannot be proved because in each class of place operations were conducted in all the places on the list so that no controls are available and because of the curtailment of the detailed organised work owing to lack of funds.

In closing down the operations the writer believes that the operations from the start have shown the general efficacy of the new anti-rat measures which have been devised by Major Kunhardt and Dr. Chitre and that with a slight modification of the scheme laying special stress on the prevention of plague spreading in the off-season, the absolute prevention of plague is well within reach.

SMALL-POX.

89. One thousand seven hundred and seventy-one deaths from Small-pox were registered against 3,536 in 1920 and a decennial mean of 5,074. The death-rate was ·09 against ·18 in 1920 and ·24 the quinquennial mean. By sex, 950 were males and 821 females.

The annual mortality for previous years is given below :—

Year.	Number of deaths.	Rate per mille.	Year.	Number of deaths.	Rate per mille.
1901–1910 mean	4,962	·27	1917	3,095	·16
1911	4,727	·24	1918	8,063	·41
1912	6,331	·32	1919	6,232	·32
1913	9,833	·50	1920	3,536	·18
1914	4,209	·21	1911–1920 mean	5,074	·26
1915	1,425	·07	1921	1,771	·09
1916	3,289	·17			

90. *Distribution.*—Detailed figures are given in Annual Form No. VIII.

Although the incidence is seen to have been unusually light it was nonetheless widespread, Larkana being the one and only district which recorded no death and as many as 154 registration circles and 431 villages were infected against 237 and 953 in 1920. Death-rate was highest in the districts of Thar and Parkar (·50), Kanara (·49) and Bombay City (·34) and amongst towns, Umarkot recorded a death-rate of 1·42, Ratnagiri (1·20) and Viramgaon (1·10).

Of the 1,771 deaths from small-pox 363 were in infants under 1 year and 655 in children between 1 and 10 years of age.

March was the month of greatest severity (376 deaths) and 1,425 or nearly five-sixths of the total deaths were recorded in the first half of the year.

91. The Officers of the Department enquired into the vaccinal state of 1,786 cases of small-pox with the following results :—

Six hundred and seventy were found to have been vaccinated of which 15 died; of the 1,116 unvaccinated 214 died. The case mortality was, therefore, 5·9 among vaccinated and 19·1 among unvaccinated.

Injuries.

92. This very definite cause of death permits of no personal error by the registrar and the figures recorded annually are subject to but little variation as the following table shows :—

Year.	Number of deaths.	Year.	Number of deaths.
1901–1910 mean ..	6,879	1917	7,650
1911	7,452	1918	7,761
1912	7,175	1919	7,896
1913	7,711	1920	7,721
1914	7,670	1911–1920 mean ..	7,745
1915	8,113	1921	7,888
1916	8,096		

93. There has been an increase in the male deaths from injuries of 215 and in the female deaths a fall of 48 as compared with the previous year. Further comparisons arranged under the various heads is set forth in the following table :—

Causes.	1921.			1920.		
	Male.	Female.	Total.	Male.	Female.	Total.
Drowning	1,274	1,544	2,818	1,307	1,681	2,988
Poisoning	96	43	139	92	26	118
Hanging	164	62	226	151	59	210
Wounding	1,035	441	1,476	923	456	1,379
Wild beasts	55	16	71	37	12	49
Snake-bite	878	543	1,421	783	468	1,251
Rabies	115	58	173	129	77	206
Railway-accidents	117	30	147	163	25	188
Other causes	883	534	1,417	817	515	1,332
Total ..	4,617	3,271	7,888	4,402	3,319	7,721

94. One thousand four hundred and twenty-one deaths were attributed to snake-bites against 1,251 in 1920. The highest number occurred in Ratnagiri (312); next in order were Thana (152), Satara (92), Kaira (87), Ahmedabad (77) and Poona (60), while only two deaths were reported from Bombay City.

In the Southern Registration District in 29 cases the snake was identified as a cobra and the interval between the bite and death varied from half an hour to fourteen hours.

In the Guzerat Registration District, 123 deaths were caused by "black serpents", 14 by "cobras", while 97 deaths were caused by others, the species being "unknown". The interval between the bite and death by black serpents varied from 5 minutes to 3 days and by cobra from 3 to 24 hours.

In Sind Registration District, of 205 deaths, due to snake-bites, 196 deaths were enquired into; in 64 cases the snake was identified as a "viper" and 27 as a

"cobra". The duration between the bite and death was between 5 minutes and 8 days.

95. One hundred and seventy-three deaths were reported from rabies (115 males and 58 females) against 206 in 1920. The highest number (30) was reported from Ahmedabad District, and Ahmedabad City also is highest amongst towns with 8 fatal bites.

96. Suicidal deaths show a 12 per cent. decrease as compared with 1920 and the decrease is more marked amongst females. The actual figures are for 1921 :—Male 268, female 170, total 438, and for 1920 :—Male 285, female 215, total 500. The methods adopted by suicides in the four districts that returned the highest number of deaths are tabulated as follows :—

Analysis of Deaths by Suicide.

Name of district.	Drowning.	Poisoning	Hanging.	Wounding.	Total.
Bijapur	9	1	40	3	53
Belgaum	10	3	34	4	51
Dharwar	6	2	32	0	40
Bombay City	16	6	10	8	40
Total for above-named areas ..	41	12	116	15	184

Other Causes.

97. Under this heading deaths from a variety of causes—debility, old age, rheumatism, chronic cases belonging properly to one or other of the tabulated headings and deaths from diseases common in occurrence but beyond the ken of the village registrar—It covers ordinarily about one-fourth of the total deaths and in numerical importance in the mortality tables, therefore, comes second to "Fevers" than which it is subject to less variation. For both reasons it presents one of the reliable indices of the general health of the community.

98. 134,263 deaths (68,590 males and 65,673 females) were registered as compared with 141,662 in 1920 and the decennial mean of 154,842. There is, therefore, a reduction in actual deaths recorded of 5 per cent. and 13 per cent., respectively, on the total of periods contrasted while the incidence of death amongst every thousand of the population living is 7·01 for the year in review against 7·23 for 1920, 7·91 the mean for the decade and 8·40 the mean for the five years 1916—1920.

The annual number of deaths, registered under this head in previous years, is as follows :—

Year.	Number of deaths.	Rate per mille.	Year.	Number of deaths.	Rate per mille.
1901–1910 mean	140,618	7·61	1917	181,877	9·29
1911	130,871	6·68	1918	184,787	9·43
1912	162,143	8·28	1919	150,156	7·67
1913	133,815	6·83	1920	141,662	7·23
1914	159,720	8·15	1911–1920 mean	154,842	7·91
1915	138,006	7·05	1921	134,263	7·01
1916	165,382	8·44			

99. *Deaths from child-birth.*—4,501 deaths were reported under this sub-head against 4,163 in 1920. For the Western, Central, Southern, Guzerat and Sind Registration Districts, the total deaths were 1,405, 693, 643, 383 and 906, respectively, as compared with 1,428, 585, 805, 229 and 694 in 1920. In Bombay City 471 deaths were recorded.

Taking the Presidency as a whole, one woman was reported as having died as the result of child-bearing to every 139 live births as compared with 142 in 1920.

For the different Registration Districts the proportion of live births to each fatal case of child-bearing was Western Registration District 104, Southern 181, Central 231, Guzerat 282 and Sind 82. In Bombay City one woman died to every 40 recorded births.

Amongst Collectorates the toll of life exacted by child-birth is greatest for Kanara where a mother died to every 57 births registered. The maternal mortality for other districts of the Southern Registration District are—Bijapur one to 214 births, Dharwar 1 to 228 and Belgaum 1 to 327. Elsewhere the following districts show high rates.

Kolaba 1 to 97 births, East Khandesh 1 to 129, Satara 1 to 158, Ratnagiri 1 to 239, Surat 1 to 214, Ahmedabad 1 to 240, Karachi 1 to 41 and Sukkur 1 to 69 births.

The excessive rate for Kanara is stated by the Assistant Director of Public Health to be mainly due to the devitalising effect of malaria during the child-bearing period.

For the Presidency as a whole, the maternal mortality rate for urban areas was 1 to 63 births while for rural areas it was one to 176 births as compared with 70 and 174, respectively, in 1920.

100. The number of deaths from the Chief Diseases for each Collectorate, by months, are shown in Annual Forms Nos. VII to XII.

SECTIONS VII AND VIII—No remarks.

SECTION IX.

SANITARY WORKS—CIVIL.

MUNICIPALITIES.

101. The number of Municipalities remained unchanged during the year 1921. There are in all 157 and their combined population 26,69,426 at the recent census shews an increase of 3 per cent. since 1911. The co-temporary fall of 6 per cent. in the general population shews that migration of the rural and village populations into the larger towns is taking place and indicates the necessity for greater expansion in municipal arrangements to meet the increasing risks to public health that go with life in crowded community. The aggregate income for the year was Rs. 1,93,88,232. Rs. 92,59,197 or just under 47 per cent. of the income was raised by taxation, giving an incidence per head of population of Rs. 3-7-10 which is a decrease of one anna and two pies per head on taxation in 1920. Taxation varied between Rs. 10 per head in Karachi City and annas 4⅛ in the small Municipality of Betavad in West Khandesh. The figures include the special conservancy cess levied in many municipalities.

The following statement shews the incidence of income and taxation per head of population in the larger municipalities :—

Bombay	17—14
Karachi	28—10
Ahmedabad	6—5
Poona	6—5
Surat	5—4
Hyderabad	8—6
Sholapur	4—2

The expenditure on public health measures in Karachi City was Rs. 10 per head of population and averaged slightly over Rs. 2 in the remaining municipalities. In Bombay City the figure was at the rate of Rs. 11 approximately.

The following table shews the death-rate amongst the municipal populations in each district. Poona, Ahmedabad, Karachi, East Khandesh, Hyderabad and Kaira are seen to be the most unhealthy in the order named. Out of 157 municipalities, 42 suffered from plague, 37 from small-pox and 30 from cholera, while 42 recorded influenza :—

STATEMENT A.

Statement showing by districts, combined birth and death rates for Municipalities in the Bombay Presidency during the year 1921.

Districts.	Number of Municipalities.	Ratio of Births per 1,000 of population.	Ratio of Deaths per 1,000 of population.					
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.	Remarks.
Ahmedabad	10	37·78	·02	·31	·01	·03	37·81	
Kaira	9	37·18	·11	·08	·02	·02	29·77	
Panch Mahals	2	23·42	1·49	·49	·00	·00	19·75	
Broach	3	41·36	·00	·00	·00	·24	27·12	
Surat	3	24·06	·03	·33	·03	·69	26·33	
Thana	4	21·96	·03	·09	1·32	..	26·00	
Ahmednagar	4	23·80	1·01	..	..	0·01	26·64	
East Khandesh	12	29·47	2·38	..	3·49	·49	30·26	
West Khandesh	7	30·51	·88	..	·68	·01	25·75	
Nasik	6	28·57	·10	·20	·47	·08	28·50	
Poona	12	18·10	0·08	0·24	0·04	0·14	39·25	
Satara	12	23·98	..	0·03	0·06	..	20·78	
Sholapur	5	27·54	1·39	0·01	..	..	4·49	
Belgaum	6	30·34	·03	·03	·05	·21	20·22	
Bijapur	4	35·77	..	..	..	·01	26·34	
Dharwar	10	30·55	·10	·10	·63	·34	21·44	
Kanara	8	26·88	..	·39	..	·08	19·10	
Kolaba	7	22·28	·02	·11	·21	·23	22·63	
Ratnagiri	4	35·46	..	·44	..	·08	22·10	
Karachi	5	37·96	·77	·17	·24	·58	33·36	
Hyderabad	6	36·42	·14	..	..	·38	30·15	
Sukkur	5	29·04	·04	·01	..	·05	25·49	
Larkana	5	32·63	·03	..	..	..	25·97	
Nawabshah	2	18·81	..	..	·06	·22	13·69	
Thar and Parkar	2	16·47	·10	·60	..	·80	22·18	
Upper Sind Frontier ..	1	22·21	..	..	..	..	15·12	
Bombay Suburban District ..	3	13·78	·35	·19	·54	·09	22·00	

Eleven Municipalities shared the general improvement in death-rate for the year. In three Revenue Districts as compared with 8 in 1920 the municipal death-rate exceeded 30 per 1,000 of population. Those shewing high figures suffered from cholera and influenza.

A complete sanitary survey by the Assistant Directors of Public Health was made for four towns in the Western Registration District, 6 in the Central Registration, 4 in the Southern Registration District, 4 in the Gujerat Registration District and 6 in Sind; and advice in sanitary matters was given in 28 towns. Action was taken by many, both in regard to routine or special matters (conservancy, water-supply and prevention of spread of epidemics) and in measures of a more general nature. The following is a brief summary :—

Matheran—Thirty-eight latrines within the catchment area of the Lake Charlotte were converted into a pattern prescribed by the Superintendent in which urine and ablution water are kept separate and the former is not allowed to soak into the surrounding grounds. *Dhulia*—The new Nightsoil Depot is provided with a wall; Soakaway pits are being provided for the new Police Head-quarters near the road to the Court. Owing to popular prejudice the anti-rat campaign was discontinued from April to October 1921 but was revived from 1st November 1921. *Bandra*—Twenty-five pairs of bullocks were purchased with a view to render better sanitary service at a small cost. Seven additional Kutchra and cess-pool carts were also purchased. *Trimbak*—A Sanitary Inspector was appointed and the staff of sweepers was increased. An incinerator for house and street refuse was purchased; and urinals were constructed at various centres. Prickly-pear was removed from the village site; all step-wells were closed. Improvements to water-supplies were carried out in Dharangaon, Raver, Dakore, Jalgaon, Matiari and Ratodero municipalities. In Kharda and Vambori roads and gutters were repaired. *Shirpur*—Rs. 3,235-15-7 were spent on laying pipes and for gutters along Brahma-Tek. *Bhusaval*—Rs. 1,226 were spent on constructing a 900′ length of new gutter and Rs. 553 on repairs to the existing gutters. *Alandi*—Two permanent urinals have been constructed one for men and the other for women. *Poona*—East West Road to open congested areas and Tilak Road to develop the adjoining open land are under consideration. Old drains of houses are being connected with the new sewerage system. *Kaira and Anand* made repairs to latrines. *Kapadvanj*—Two night-soil carts for the removal of night-soil and 5 dust-bins were purchased. *Broach*—Four temporary Table dispensaries were opened to cope with Influenza; six locally made rubbish carts and 12 dust-bins were purchased. *Bulsar*—A qualified Sanitary Inspector appointed; zinc dust-bins replaced wooden boxes. *Surat*—Twelve new night-soil carts, 3 liquid filth carts, 3 refuse carts and 25 dust-bins were purchased. *Ahmedabad*—Thirteen milk vendors were prosecuted for storing selling milk in contravention of the rules. A road water-motor lorry at a cost of Rs. 16,000 purchased; the sewage overflow on a lower level outside Jamalpur gate was completed; the carriage of meat by motor transport began and found satisfactory. *Viramgaon*—Road leading from Golwadi gate to station was remetalled. *Kotri*—Increase in number of sweepers and of dust-bins. Garden planted near Market. The municipality expressed desire to employ a qualified Sanitary Inspector.

The Nasik system of trenching night-soil has proved highly successful in Nadiad town, the municipality realized Rs. 952 over sale of poudrette. Dohad Municipality realized Rs. 207. The system is in operation in 11 towns in Gujerat and is reported as satisfactory in all except Kaira where the defects are receiving the attention of the Assistant Director of Public Health. This system has been introduced also at Malegaon, Dhulia, Dharangaon, Bhusaval, Jalgaon and Sukkur.

A large number of municipalities remain below standard in conservancy establishment and sanitary implements. Endeavours are, however, being made in the following towns and cities to work up to the standard :—Ahmedabad, Surat, Broach, Bulsar, Anand, Kapadvanj, Viramgaon, Dakore, Dholka, Umreth, Dholera, Shirpur, Nandurbar, Bhusaval, and Sukkur.

Sanitation at Palghar is in a backward state as is realized by its inhabitants but in the absence of a municipality or a Sanitary Committee no advance is possible.

102. *Municipal Health Staff.*—During the year under report Medical Officers of Health with full qualifications were employed in Karachi, Hyderabad, Surat, Poona and Ahmedabad; and in Karachi an Assistant possessing the B. Hy. of Bombay University was appointed. Health Officers possessing the Medical degree of Bombay University as well as the Sanitary Surveyors' qualification were employed at Dhulia,

Bandra and Sholapur. Both Broach and Sukkur (Sind) have employed as their Health Officers medical men not possessing public health qualifications. Nasik, Dakore and Nadiad employed Health Officers of the standing hitherto described as Third Class, *i.e.*, holding a medical qualification *plus* the certificate of the Royal Institute of Public Health obtained in Bombay. The classes for training Sanitary Inspectors under the Executive Health Officer, Bombay Municipality, for the latter course continues to be well attended and the number of qualified medical men who appear as candidates is on the increase. It is to be hoped that the remaining municipalities in this Presidency will come into line with those named above in engaging Health staff appropriate to their needs. A syllabus for the course in advance of that for Sanitary Inspectors, for aspirants to Health Officership of smaller towns has been sanctioned by Government and classes will be formed in future.

Fifty-two Sanitary Inspectors were employed during 1921 in 28 towns as follows :—Ahmedabad 11; Poona 5; Sholapur 5; Surat 3; Bandra, Karachi, Sukkur and Hubli 2 each and in the following one each :—Bulsar, Broach, Umreth, Viramgaon, Ahmednagar, Satara, Pandharpur, Dhulia, Jalgaon, Nasik, Malegaon Thana, Kurla, Hyderabad, Larkana, Belgaum, Dharwar, Gadag, Bijapur and Bagalkot. In 1920 there were 50 men of this class in 26 towns. The difficulties of these employees in efficiently discharging their duties, in securing genuine co-operation and with regard to insecurity of tenure of appointment remain as stated in previous reports.

The following municipalities resolved to adopt the scheme laid down in Government Resolution, General Department, No. 368 of 1st September 1921 with regard to Health Officers and Sanitary Inspectors :—Ahmedabad, Surat, Broach, Viramgaon and Poona.

Nadiad Municipality has receded from its position in the advancement of public health in its area by resolving not to pay its Health Officer. The grounds put forward are :—

(*a*) That the salary generally paid would exceed that of their Chief Officer and

(*b*) That their finances would not bear its expenditure.

The municipalities of Rander, Kaira, Prantij and Bulsar for advice on sanitary matters rely on the medical officers amongst their Councillors, while the municipalities of Mahudha, Sanand, Dhandhuka, Modasa and Kapadvanj pay the Dispensary Medical Officers Rs. 5 to Rs. 20 per mensem for such advice.

Local Sanitation by Dispensary Medical Officers.—In the Central Registration District, advice was given by the Sub-Assistant-Surgeons to the municipalities of Sirur, Baramati, Jejuri, Junnar, Alandi, Talegaon-Dabhade, Madha, Chiplun and Sangamner and with one exception it was acted on.

In Sind no Sub-Assistant-Surgeon in charge of a dispensary communicated with the Assistant Director of Public Health in regard to sanitary matters of his town. The Government Order (No. 8353 of 5th August 1920) does not seem to be in operation in that province.

The Assistant Director of Public Health, Southern Registration District, visited 12 dispensaries and conferred with the medical officers as regards sanitary matters in respect of the towns. The Sub-Assistant Surgeons plead that their medical duties leave them no time to do any sanitary work.

The arrangement of the Dholka Municipality in paying Rs. 10 as local allowance to the Sub-Assistant Surgeons for doing the duties of Health Officer is not proving satisfactory.

103. *Sanitary Board.* — During the year the Sanitary Board sanctioned 5 water-supply schemes, and 5 drainage schemes. Boring operations were made in 11 towns while 80 schemes for major and minor sanitary works were under investigation by the Sanitary Engineer to Government, Bombay. For details a reference is invited to that officer's report in his capacity as Secretary to Sanitary Board published in Appendix I.

104. *Town Improvement Schemes.*—No large town improvement scheme has been reported as completed with the assistance of Government grant. A meat market was constructed at a cost of Rs. 10,310 at Mirpurkhas. This may more appropriately be called a minor sanitary scheme.

105. *District and Taluka Local Boards.*—The combined income of the 26 District Local Boards and 219 Taluka Local Boards was Rs. 1,28,55,837. Income and taxation per head of population were 10.5 and 2.6 against 11.8 and 3.7 annas in 1920. A total sum of Rs. 5,36,999 was spent on communications by these bodies while Rs. 3,91,225 were spent on public health work

Under Government Order, General Department, No. 10126 of 25th August 1921, the following grants were placed at the disposal of the Commissioners of Divisions for distribution among the District Local Boards of the Presidency and Sind. The allotments from the Imperial grant of Rs. 7 lakhs were incorporated by the Boards in the general revenues and utilized for road repairs :—

Divisions.	Imperial— for communications.	Additional grant from Provincial.— for road repairs.
	Rs.	Rs.
Northern Division	1,82,000	2,14,000
Central Division	2,08,000	2,48,000
Southern Division	1,56,000	1,69,000
Sind Division	1,54,000	1,93,000

Government also sanctioned a grant-in-aid of Rupees 1,20,000 for improvements of village water-supply in their General Department, Order No. 6344 of 21st May 1921 which was distributed as follows :—Northern Rs. 35,000 ; Central Rs. 32,500 ; Southern Rs. 20,000 and Sind Rs. 32 500.

These grants were supplemented by allotments from Local Funds and popular contributions and were expended in constructing wells, tanks, troughs and cisterns, in repairing old wells, deepening existing tanks, in boring and jumper operations and in closing step-wells.

99 step-wells were converted into draw-wells out of which 19 were in Poona and 44 in Kanara Districts. The number of draw-wells newly constructed was 673, out of which 169 in 89 villages in East Khandesh Collectorate. A direct beneficial result of closing step-wells is the reduction in incidence of guinea-worm, a disease responsible for much invaliding in a large area of the Deccan. The fact is nevertheless to be recorded that new wells continue to be laid down with step approaches even in some of the highly infected areas.

106. During the year shortage of water was felt in many villages and famine conditions existed, in Ahmednagar, Sholapur and Bijapur. Regular famine relief works were opened and medical assistance was given. Arrangements to deal with the water-supplies both to increase the amount and to safeguard the purity were taken in hand early. The Instructors in purification of water-supplies proved of especial value in Ahmednagar and Bijapur Districts. They toured the camps and relief works in turn, sterilized the famine-camp water-supplies and the wells in surrounding villages and taught the process to the Charge Officers, Sub-Assistant Surgeons and others in villages.

Returns received from 8 Famine Relief Camp Hospitals show that 862 in-patients and 15,128 out-patients were treated while the patients treated in the Poor Houses were as follows :—Ahmednagar 465 ; Shrigonda 339.

There were 83 in-patients in Ahmednagar Poor-House. Frequent inspections of the relief camps and works were made by the Assistant Directors of Public Health and Charge Officers, Medical Officers and others concerned were given advice and suggestions as was required in each case with regard to health and sanitary matters generally. Prevention of the spread of epidemics was the special objective. The Director of Public Health visited all the camps in Ahmednagar District.

Ordinarily the depopulation that ensues on the appearance of scarcity masks the effects of famine as judged by mortality figures. The latter are of necessity based on the previous census population and there is no means of accurately guaging the amount of temporary emigration. For the famine under review, however, the death returns for 1921 based on the census figures of that year (subsequently published) indicate that the health of the public in affected areas for the period under report was decidedly below normal.

107. *Acquisition of lands for extension of village sites.*—Progress made in the village sites for the relief of over-crowding may be summarized as follows :—

Poona District—A much-needed improvement in the approach to Shri Dnyanoba's Temple at Alandi is being effected by the acquisition of one of the neighbouring houses on the advice of an officer of this department.

Land has been acquired in Poona City for the Municipal East to West Road Scheme. This scheme should effect the removal of insanitary slums and the opening up of the congested area in Budhawar Peth.

In Ahmednagar District, land was acquired in Kopargaon Village for the extension of village site.

In East Khandesh District, land measuring 3 acres and 23 gunthas out of survey No. 164 of Akulkhed was acquired for extension of village site on a prepared plan in Chopda Taluka.

Kanara District—To relieve congestion in two villages, Shedgeri and Vandige—of Ankola Taluka, land measuring 19 acres and 4 gunthas and 12 acres and 26 gunthas was acquired and handed over and in Kurli village, Taluka Mundgod, an area of 4 acres for the same purpose.

In Bijapur District—There were 46 villages in need of additional gaothans. In 16 of these, acquisition has been completed and the plots handed over ; in 5 cases Government land has been added to the village sites. In 9 cases acquisition proceedings are going on.

Kaira District—For extension of the village of Sandeshar in Anand Taluka an extensive area was acquired from private owners. A village planning scheme was not prepared.

In Nawabshah District in all, 57 acres and 11 gunthas of land were acquired with a view to relieve overcrowding of the following villages :— Nawabshah (6 acres 12 gunthas), Shahdadpur (14 acres 9 gunthas), Shahpur (5 acres 31 gunthas), Bhiri (20 acres), Tharushah (3 acres 13 gunthas) and Abran (7 acres 21 gunthas).

Larkana District—Land was acquired in two villages of Kambar Taluka and two villages in Sehwan taluka for the extension of village sites.

108. *Notified Areas.*—Nandgaon Notified Area having been declared a Municipal District there remain 35 Notified Area Committees.

The population served by these Committees during the year was 1,42,469 and the total income excluding opening balance came to Rs. 2,41,780 giving an incidence of income per head of Rs. 1-11-2.

The following tables give the details of income and expenditure and the combined birth and death rates for Notified Areas in each District.—

Statement B.

Income and Expenditure of the Notified Area Committees during the year 1921-22.

Districts.	Serial No.	Names of towns and villages.	Population.	Income including opening balance.	Expenditure.	Closing balance.	Remarks.
Broach ..	1	Palej	4,323	5,973	3,978	1,995	There are 11 Notified Area Committees in Ahmedabad District and 7 in Thana District which supervise building operations only and they have collected no funds.
Bombay Suburban District ..	1	Andheri	3,981	64,019	37,378	26,641	
	2	Borivli	1,182	11,537	10,659	878	
	3	Malad	8,460	23,237	17,094	6,143	
	4	Santa-Cruz	4,765	32,145	28,710	3,435	
	5	Vile-Padle	7,458	54,847	34,199	20,648	
East Khandesh ..	1	Pachora	7,879	17,654	9,653	8,001	
	2	Jamner	7,183	8,330	6,409	1,921	
West Khandesh ..	1	Dondaicha Warwada ..	4,193	4,005	2,305	1,700	
Nasik ..	1	Manmad	7,257	24,884	15,630	9,254	
Poona ..	1	Dhond	3,112	4,313	3,880	433	
Sholapur ..	1	Madha	4,869	4,812	3,272	1,540	
	2	Kurduwadi	3,618	10,293	6,186	4,107	
	3	Malsiras	1,620	1,836	1,133	703	
Belgaum ..	1	Chikodi	7,143	4,321	4,131	190	
	2	Khanapur	5,122	4,987	2,033	2,954	
Dharwar ..	1	Hirekerur	2,635	1,478	1,361	117	
	2	Hangal	5,078	862	854	8	
Ratnagiri ..	1	Rajapur	6,349	20,255	20,015	240	
	2	Khed	3,842	3,410	2,083	1,327	
	3	Dapoli	2,689	5,416	3,963	1,453	
Kolaba ..	1	Karjat	2,262	10,858	9,562	1,296	
Bijapur ..	1	Indi	5,058	1,586	1,275	311	
	2	Muddebihal	4,411	2,827	1,915	912	
	3	Hungund	5,562	2,022	1,682	340	
Sukkur ..	1	Kote Sultan ..	1,696	2,058	2,044	14	
	2	Mirpur Mathelo ..	1,632	1,580	1,217	363	
	3	Ubauro	1,716	1,760	1,277	483	
	4	Khairpur	1,657	2,018	1,371	647	
Nawabshah ..	1	Naushahro	3,400	2,062	1,742	320	
	2	Kandiaro	3,013	1,427	1,137	290	
Larkana ..	1	Mehar	2,746	16,011	9,819	6,192	
	2	Khairpur Nathan Shah ..	1,484	2,196	2,091	105	
	3	Dadu	2,440	4,748	2,478	2,270	
Hyderabad ..	1	Tando Jam ..	2,634	5,072	2,032	3,040	
	35	Total ..	142469	364829	254568	110261	

Statement C.

Statement showing by Districts, Combined Birth and Death rates for Notified Areas in the Bombay Presidency during the year 1921.

Districts.	Number of Notified Areas.	Ratio of Births per 1,000 of population.	Ratio of Deaths per 1,000 of Population.					Remarks.
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.	
Broach	1	18.04	..	..	..	..	16.19	
Bombay Suburban District	5	9.00	.43	..	.08	..	14.31	
East Khandesh ..	2	32.64	.53	..	.13	3.85	35.56	
West Khandesh ..	1	37.77	.25	..	..	..	29.08	
Nasik	1	9.86	.08	..	.08	..	10.79	
Poona	1	15.62	..	..	..	..	14.93	
Sholapur	3	20.92	..	..	..	..	16.67	
Belgaum	2	37.18	..	..	..	..	18.35	
Bijapur	3	37.46	..	..	..	..	25.28	
Dharwar	2	37.60	..	..	6.35	.13	24.50	
Ratnagiri	3	27.38	..	.36	..	..	27.38	
Kolaba	1	23.41	..	..	..	..	38.02	
Sukkur	4	38.05	..	..	..	..	26.71	
Larkana	3	33.62	..	..	..	..	23.66	Population not available.
Hyderabad	1	..	..	..	..	..	..	
Nawabshah	2	33.37	..	..	..	1.56	17.46	

Work of sanitary utility were carried out by Notified Area Committees as follows :—

Jamner spent Rs. 72-12-0 for repairs of gutters and Rs. 98-8-3 for water-supply and Rs. 1,549-14-8 on sanitary improvements, including pay of sweepers.

Manmad sunk a well in the bed of the river at a cost of Rs. 1,322-6-7.

Karjat spent the whole net income on dispensary. Kandiaro made improvements to wells. Mehar provided public latrines.

Advice on public health matters was given by the Assistant Directors of Public Health to the Notified Area Committees at Palej, Naushahro Feroz and Kandiaro.

109. *Village Sanitary Boards :*—The following statement shows the income and expenditure of Village Sanitary Boards during the year under report :—

Statement showing, by Districts, the income and expenditure of the Village Sanitary Boards in the Bombay Presidency during the year 1921-22.

Districts.	No. of village Sanitary Boards.	Name of villages.	Popular Contribution.	Total income including opening balance.	Total expenditure.	Closing balance.	Remarks.
			Rs.	Rs.	Rs.	Rs.	
Kanara ..	1	Kandli, Balikop, Hosur } Siddapur ..	6*	33	27	6	*Provincial and Local Fund grants were not paid during the year as the popular contributions were not collected.
Thana ..	1	Gholwad-Bordi ..	600	1,909	1,045	864	
Surat ..	1	Chikhli-Samroli ..	425	1,823	1,007	816	
Poona ..	1	Aundh and Bopodi ..	1,068	1,110	516	594	

The following are items of work executed by some of the Village Boards.

(*a*) Eight newly built latrines in Survey No. 24 of Bopodi were taken on lease for the use of residents. Arrangement was made with the contractor for the removal of night-soil to the Kirkee Depôt.

(*b*) Pits were dug for storing rubbish and sweepings.

(*c*) A sweeper was employed for the villages of Aundh and Bopodi.

110. *Sanitary Committees.*—During the year Sanitary Committee was newly formed as under :—

Sind Division.—Vanki Vasi in Hyderabad District. The Sanitary Committee at Ittelapor (Surat District) was abolished.

Detailed information regarding income and expenditure and the birth and death rates for the population under the administration of Sanitary Committees are given by Districts in the following two tables :—

Statement showing, by Districts, the income and expenditure of the Sanitary Committees in the Bombay Presidency during the year 1921.

Districts.	Number of Sanitary committees.	Total income including opening balance.	Popular contributions.	Total expenditure.	Closing balance.
		Rs.	Rs.	Rs.	Rs.
Ahmedabad	8	10,890	2,632	6,714	4,176
Kaira	29	38,607	8,217	18,363	20,244
Panch Mahals	5	4,952	589	2,704	2,248
Broach	27	36,904	7,478	22,700	14,204
Surat	20	19,339	6,703	14,400	4,939
Thana	11	21,541	4,745	11,647	9,894
Total, Northern Division ..	100	1,32,233	30,364	76,528	55,705

Districts.	Number of Sanitary committees.	Total income including opening balance.	Popular contributions.	Total expenditure.	Closing balance.
		Rs.	Rs.	Rsr,	Rs.
Ahmednagar	20	27,568	5,524	20,413	7,155
East Khandesh	14	47,560	9,107	29,788	17,772
West Khandesh	8	15,998	2,999	8,698	7,300
Nasik	24	29,210	3,410	13,989	15,221
Poona	16	9,512	2,038	4,623	4,889
Satara	20	11,173	4,965	7,087	4,086
Sholapur	4	3,204	831	2,156	1,048
Total, Central Division ..	106	1,44,225	2,88,874	86,754	57,471
Belgaum	32	49,853	8,956	24,448	25,405
Bijapur	13	24,536	4,027	9,106	15,430
Dharwar	48	49,145	8,693	22,563	26,582
Kolaba	29	24,110	7,282	15,207	8,903
Ratnagiri	3	1,372	625	624	748
Total, Southern Division ..	125	1,49,016	29,583	71,948	77,048
Karachi	37	33,046	6,563	13,959	19,087
Hyderabad	39	34,049	7,560	17,469	16,580
Sukkur	16	13,438	3,493	9,537	3,901
Larkana	50	31,842	6,453	19,893	11,949
Nawabshah	26	36,029	6,883	19,394	16,635
Thar and Parkar	26	34,589	7,024	17,537	17,052
Upper Sind Frontier	11	15,578	3,880	11,691	3,887
Total for Sind ..	205	1,98,571	41,856	1,09,480	89,091
Grand Total ..	536	6,24,045	3,90,677	3,44,710	2,79,335

Statement showing by District, combined Birth and Death rate for Sanitary Committees in the Bombay Presidency during the year 1921-22.

Districts.	Number of Sanitary Committees.	Ratio of Births for 1,000 of population.	Ratio of Deaths per 1,000 of population.				
			Cholera.	Small-pox.	Plague	Influenza	From all causes.
Ahmedabad	8	30·95	·00	·23	.00	.00	23·38
Kaira	29	31·17	·01	·00	.00	.09	23·76
Panch Mahals	5	42·88	·45	·00	.00	.06	24·47
Broach	27	37·75	·02	·03	..	.21	25·95
Surat	20	38·05	·00	·06	.01	.32	21·83
Thana	11	26·50	..	·14	..	..	18·26
Ahmednagar	20	26·22	..	..	..	0·34	23·54
East Khandesh	14	39·04	1·22	..	1.45	..	33·52
West Khandesh	8	34·92	1·36	..	..	..	26·36
Nasik	24	73·10	·37	..	..	..	55·48
Poona	16	25·62	0·29	..	..	0.05	18·38
Satara	20	32·37	..	..	0.72	..	19·35
Sholapur	4	32·87	..	..	..	..	22·97
Belgaum	..	36·77	..	·01	..	.26	17·09
Bijapur	13	35·32	..	..	..	.27	24·13
Dharwar	48	34·88	·02	·06	1.22	.15	26·58
Kolaba	29	34·58	·08	·31	.06	.12	27·29
Ratnagiri	3	21·99	..	..	..	..	21·99
Karachi	..	27·28	3·93	..	..	.18	30·25
Hyderabad	..	27·28	..	..	..	..	28·47
Sukkur	16	41·04	·04	·08	..	..	23·08
Larkana	49	30·57	..	..	..	..	20·68
Nawabshah	26	33·10	..	·34	..	.03	22·32
Thar and Parkar	26	25·40	·27	1·17	..	..	22·77
Upper Sind Frontier	11	34·81	..	..	..	..	21·71

The Assistant Directors of Public Health visited 48 Sanitary Committees' areas. Samples of useful work done by some of these bodies are as follows :—

Songir spent Rs. 492 for surface drainage. Holnath, Thalner, Ranala, Newasa and Neri Budruk repaired wells. Bhadgaon spent Rs. 22 on the purchase of disinfectants. Varangaon opened a new dispensary. Lasalgaon, Manhar and Belhe removed prickly-pear. Karjat, Mirajgaon, Ghoda and Manchar made road repairs. Improvements in conservancy were effected at Halani, Rahata, Kada, Bardoli and Dahiwali. Khanapur (Sukkur District) took action to remove pottery outside the village. Kasegaon and Natepute in Sholapur District and Malegaon in Nasik District, Kopargaon in Ahmednagar District and Pardi in Surat District, worked well.

SECTION X.

GENERAL REMARKS.

Public Health Laboratories.

111. There are two Public Health Laboratories—one in Poona and the other, for Sind, in Karachi. The establishment of a similar Public Health Laboratory at Ahmedabad has been postponed owing to financial stringency.

Dr. J. B. Mama, D.P.H., was in charge of the Poona Laboratory up to 12th October 1921 when Dr. K.A. Gandhi, D.P.H., took over.

The bulk of the routine bacteriological and chemical work at the *Poona Laboratory* was, as hitherto, in connection with the water-supply installations in Poona Camp, Poona City and at Pashan and Kirkee. Besides this, samples of sewage from Hadapsar were regularly analysed and chance water samples from Poona and out-stations were examined as received.

The installation of the Poona Camp Water Works consists of settling tanks and eight rapid filters with the necessary devices for adding alum and bleaching powder solution automatically in such manner as to ensure efficient chlorination without imparting any disagreeable taste or odour to the treated water. To meet the extra demand for water, two more filters are to be installed. Water of a high degree of purity was supplied throughout the year.

The Poona City installation consists of settling tanks only. During the greater part of the year when the raw-water is not highly charged with emulsified silt a water up to potable standard is produced. A modification in the chlorinating system now being introduced is calculated to effect an improvement in the bacterial content of the output.

At Pashan rain water is collected in an open tank, is passed through slow sand filters, finally chlorinated and supplied to Government House and a part of Kirkee Cantonment.

At the Kirkee Emergency Water-Works used during the monsoon for Kirkee Cantonment, Mula river water is pumped into a settling tank and treated as is done with the Mutha Canal water at Poona Camp with equally good results.

During the year 2155 samples were examined bacteriologically and 1825 chemically. Samples from the new Ahmednagar supply were examined at intervals at the laboratory and again at site commencing before the installation was completed.

The Laboratory and Camp Water-Works received the usual visits by various individuals including medical officers, students and others and the short systematic course of instruction in purification of water, collection of samples, etc., was given to a few persons.

The Karachi Public Health Laboratory was in charge of Dr. Fred Barretto, D.P.H.

Routine chemical and bacteriological examination of both treated and raw Karachi water and estimation of the dose of bleaching powder just necessary to sterilize the supply were carried out as detailed in last year's report.

The seasonal variation in amount of bleaching powder required is found to be greater than would be expected, *viz.*, from about 12 lbs. per 5 million gallons in the dry season to as much as 72 lbs. after rains. A scientific mechanism for adding the bleaching solution is yet to be provided.

On receipt of the necessary equipment from England the laboratory proceeded to expand into another of the spheres of work for which it was designed, *viz.*, in connection with food-stuffs. Samples of milk and ghee are now regularly received and examined. It may be noted that pending legislation with regard to Food and Drugs, this function of the laboratories remains restricted.

Miscellaneous work at the *Karachi Laboratory included*—

(1) Examination of well waters as required by the Health Officer of the Municipality.

(2) Examination of samples from Sind Jail water-supplies and other chance samples ; estimating carbolic acid co-efficient of antiseptics.

(3) Examination of vomit of suspected cholera cases, of spinal fluid in suspected cases of Cerebro-Spinal Meningetis ; preparation of Diphtheria culture-serum required by the local Military Medical authority.

Dr. Barretto reports that there are indications of a field for further work if a fully equipped pathological section formed part of the Institution.

Fairs and Festivals.

112. *Pandharpur.*—The chief day of the Ashadhi Fair was on 15th July 1921. The total number of pilgrims was 133,399 including 4,601 free passes.

Medical and Sanitary staffs were assembled for duty in connection with the fair as follows :—

One Assistant Surgeon and one Sub-Assistant Surgeon for duty at the Cholera Hospital.

Sub-Assistant Surgeons—5—under the Civil Surgeon, Sholapur, for duty at Kurduwadi Railway Junction ; 1 for inspection of food and 16 others at Pandharpur.

A list of the dates and places of halting of the palkhis had been supplied to Collectors, Native States and the Surgeon General. A programme was worked out so that the palkhis were kept under constant surveillance by the Medical Officers of dispensaries along their routes. The Sub-Assistant Surgeon at Alandi was unable to accompany his palkhi in its first stages, so Dr. da Gama personally inspected it at 3 points early in the route. All palkhis remained free of epidemic disease.

Ten qualified Sanitary Inspectors and the usual staff of sweepers, scavengers, etc., were entertained.

Some anxiety as to a sufficiency of drinking water at the fair was dispelled by a fall of rain on 13th July. The lateness of this event, however, meant that the first washings of the catchment constituted the drinking-supply. Cases of cholera appeared early, the first a woman from Bangalore on 13th July. Seventeen cases were admitted to hospital and 11 were fatal. Returning pilgrims spread infection to Sholapur, Karmala and Satara talukas.

The question of improvement and protection of water-supplies on the Alandi-Pandharpur Palkhi route is still under consideration.

The Kartiki Fair at Pandharpur is next in importance to Ashadhi. The average attendance is somewhere between 80,000 to 100,000. There is only one palkhi (from Barsi) during this fair. The staff engaged was 7 Sub-Assistant Surgeons, 6 Sanitary Inspectors and 80 bhangis.

Alandi.—The fair (Kartiki) was held on 11th November 1921. The attendance was nearly one lakh.

The village in virtue of its main importance the fair, is constituted a municipality and that small body very capably looks after the health interests of the locality during the times of influx of visitors. A four-anna tax per pilgrim is levied. Covering in of the sacred Bhagirthi Nala along part of its course and diversion of its outfall and the opening up of a separate entrance to the shrine for females in order to relieve the growing congestion are recent works of improvement. On the advice of Dr. da Gama, the Assistant Director of Public Health, the provision of a steam pump, cisterns with taps, and sterilizing of the water so supplied is undertaken on each occasion.

There is an Infectious Diseases Hospital and special Sub-Assistant Surgeons are deputed during the fair. The municipality obtains the additional conservancy staff and carts from the Poona City Municipality.

The Sinhast Festival at Nasik and Trimbak referred to in last year's report came to a close on 11th August 1921. A full report on the festival was published in Government Resolution, General Department, No. 1398 of 19th May 1922.

Yellamma Fair (150,000) was held in January, and Gokarn (100,000) and Yamnur (20,000) Fairs took place in March. The figures are the approximate number

of pilgrims that attended. All these fairs were visited by the Assistant Director of Public Health, Southern Registration District, and he with the assistance of the Inspectors of Sanitation and Vaccination concerned, supervised the sanitary arrangements. Water-supplies were treated with Permanganate of Potash. There was no outbreak of infectious disease, nor were these fairs responsible for any epidemic elsewhere.

The Festivals at Vautha in Dholka Taluka and at Shukaltirth in Broach Taluka were held from the 13th to 16th November 1921 at which 100,000 and 35,000 pilgrims assembled respectively. The services of the Inspectors of Sanitation and Vaccination were in each case at the disposal of the District Officers for the fairs concerned.

Lal Shahbax Fair at Sehwan took place from 17th to 29th April 1921. The sanitary arrangements at the fair are reported by the Assistant Director of Public Health to have been satisfactory and no epidemic disease appeared.

Sanitary Associations.

113. There were nine Sanitary Associations working in the Presidency. All of them continue to do useful work as the following examples show :—

Karachi Association—There are 5 midwives and one lady health visitor who supervises their work and makes house to house visitations to give advice to mothers in the care and nurture of children. During the year under report, 865 cases of confinement were conducted by the Association midwives, with the loss of only two mothers.

The " Creche " or day nursery, the result of a successful Health Exhibition held in the previous year, was formally opened on 3rd March 1921. The nursery is in charge of a Lady Doctor and 2 ayahs and is in the Lyari quarter, a locality inhabited chiefly by working class people mostly Mekranis. On an average some 35 children are left at the Creche for the day. They are bathed, and fed at intervals appropriate to their ages. A garden is being developed which also serves as a play-ground.

In Hyderabad there is no Sanitary Association. The training class for dais referred to in last year's report continues to be well attended—average 30 dais. Miss Piggot further states that 300 cases of maternity were attended by the dais under her supervision and that all cases did well except one.

Broach Sanitary Association arranged four small Health and Maternity shows in the city and public lectures on " Our duty towards the children " and " Feeding and rearing of children " were also delivered. Lectures were given with the aid of lantern slides and charts on cholera, malaria, plague and tuberculosis in the different parts of the city. A booklet on maternity and care of infants was distributed and calendars containing instructions for the requirements of babies were published. The Association continued to sell pure and unadulterated milk to the public at a moderate price from their shops opened in different quarters of the city. Small Health shows were also held outside the city, *e. g.*, at Wagra and Shuklatirth Annual Fair, etc. At the invitation of the Jain Sanitary Association of Bombay, a small Health show was arranged in the Mangrol Sabha Hall at Paydhuni in Bombay for three days.

Surat Sanitary Association delivered a few lectures on epidemic diseases and held medical inspection of children of a few primary schools.

Ahmedabad Sanitary Association gave 110 lantern and other lectures on sanitary matters. Charts and exhibits were posted up at Baroda and Rajkot at the request of the Managing Committees of the exhibitions there. After a series of lantern shows, prizes were offered by the Association to the students of the Training Colleges for men and women on " Sanitation of Villages and Cities " and " Personal Hygiene " and the Prize-winning essays were published in the " Guzerat Shala Patra ".

Nadiad, Viramgam, Dharwar and other Sanitary Associations also did very useful work towards educating the public in Health matters.

Medical Inspection of Schools.

114. Medical inspection of school children was instituted during the year by the appointment of six medical officers as Inspectors for different areas.

It was realized at an early stage by the Director of Public Instruction, under whom they were placed, that much of their work would come under the purview of Public Health and the undersigned was consulted with regard to their routine programme of inspection. Work began at the end of July and as it progressed, this office was supplied with copies of statements showing a summary of the disease conditions found amongst the pupils examined.

These statements constitute a survey of 6,574 boys in 43 schools of the Presidency proper. The reports for Sind (1,339 boys) are incomplete and are, therefore, separately analysed. According to the classification of the Educational Department, the Presidency total includes: Advanced Hindus 3,873, Other Hindus 1,534, Mahomedans 882, Parsis 441, and Christians 229, but details of defects for classes separately were not submitted.

The inspection work also covered other matters of importance in general sanitation, *e. g.*, the school buildings and surroundings, furniture (suitability of desks, etc.), physical training, water-supply and latrine arrangements. These matters are not dealt with in this Report. It may also be stated here that the parents were informed through the teachers of the presence of remediable defects and diseases and that prescriptions (including in many cases prescriptions for spectacles) were issued by the Inspectors.

The health records of this Presidency are deficient in information regarding morbidity and as regards prevalence of those common diseases, mostly remediable, that are not ordinarily causes of death. The material now available in the Inspectors' statements is, therefore, of great value in indicating the state of health of the ordinary youthful population exclusive of the actual sick and in showing the incidence at school-going age of (*a*) common defects, (*b*) of what are called "minor complaints" in addition to (*c*) the information as regards prevalence of more serious diseases.

The figures of the inspection statements are shown in a table below by districts:—

Compilation of Medical Inspectors Records.

Name of District	1	2	3	4 Tuberculosis.			5 Eyes.		6	7		8 Teeth.	
	No. of Schools.	No. of boys present.	No. of boys examined.	(*a*) Diseased lungs.	(*b*) Enlarged glands.	(*c*) Diseased bones and joints.	(*d*) Defective eye sight.	(*b*) Diseases of the eye	Defective Hearing.	(*a*) Adenoids..	(*b*) Enlarged tonsils	(*a*) Two or more decayed.	(*b*) Sepsis.
Ahmedabad ..	10	1,725	1,725	2	1	..	401	74	26	74	7	37	10
Thana ..	5	490	524	2	10	..	51	14	22	3	53	14	14
Nasik ..	1	50	50	..	..	..	7	..	2	..	1	1	4
Belgaum ..	1	183	183	..	..	..	6	1	..	..	28	5	..
Dharwar ..	8	1,317	1,317	..	11	1	56	36	..	2	245	29	4
Karwar ..	7	876	876	..	5	4	32	10	5	6	137	45	..
Bijapur ..	2	461	461	1	3	..	28	10	2	2	92	5	..
Kolaba ..	1	47	47	..	..	..	1	3	1	..	..	1	3
Ratnagiri ..	2	313	308	1	5	..	25	15	9	1	28	11	10
Bombay City ..	6	1,021	1,083	5	13	2	150	28	40	47	135	214	63
Total ..	43	6,483	6,574	11	48	7	757	191	107	135	726	362	103
Sind† 3 Hyderabad, 3 Karachi, 3 Larkana, 2 Shikarpur,	11	2,551	1,339	12	346	1	304	76	160	..	571	207	205
Grand Total ..	54	9,034	7,913	23	394	8	1,061	267	267	135	1,297	569	313

Compilation of Medical Inspectors Records—continued.

Name of District.	9 Enlarged Spleen.			10	11	12		13	14	15	16	17
	(a) Not extending below rib margin.	(b) Greater enlargement.	(c) Splenic Index.	Skin diseases.	Physical deformities.	(a) Mental deficiency.	(b) Nervous defects.	Other diseases of malformations.	General debility.	Malnutrition.	Heart disease.	No unprotected from Small-pox.
Ahmedabad ..	3	9	..	103	15	..	4	5	153	62	3	9
Thana ..	16	3	21·0*	39	4	1	15	5	..	44	2	2
Nasik ..	..	..	..	1	1	..	..	..	..	..	..	..
Belgaum ..	..	..	..	16	..	..	26	7	..	7	..	..
Dharwar ..	..	1	1·0*	134	9	..	..	169	..	110	..	97
Karwar ..	..	6	..	158	11	..	1	165	..	62	..	83
Bijapur ..	..	..	..	86	2	1	..	18	..	21	..	28
Kolaba ..	..	..	..	2	1	..	1	..	..	..	..	..
Ratnagiri ..	2	1	..	27	3	..	4	..	..	1	1	3
Bombay City ..	31	21	28·30*	60	60	..	32	103	..	91	1	80
Total ..	55	41	..	576	106	2	83	472	153	398	7	302
Sind† 8 Hyderabad, 3 Karachi, 3 Larkana, 2 Shikarpur.	28	31	9·68*	62	232	5	4	626	..	417	..	224
Grand Total ..	83	75	..	638	338	7	87	1,098	153	815	7	526

* *Note.*—Splenic Index, 3 Schools in Thana, 1 School in Dharwar, 6 Schools in Bombay City and 11 in Sind.

† *Note.*—For Sind the detailed information for Schools in each district is not available.

(i) The outstanding revelation of school inspection is the prevalence of defects and diseases of the eyes. Out of the 6,574 boys examined, 757 had defective vision and 191 suffered from various forms of eye diseases. Thus in the Presidency generally 14 per cent. or one school-boy in every seven has one or other form of eye trouble or defect and in Ahmedabad schools the percentage is seen to be at the high figures of 27·26. Bombay City ranks next with 150 cases of defective vision and 28 of other eye trouble among 1,083 boys examined.

(ii) *Enlarged tonsils and adenoids.*—The number of pupils suffering from enlarged tonsils was 757 out of the total of 6,574. The incidence was found to be greatest in Dharwar District; next in order were Kanara District and Bombay City. The Ahmedabad boys showed a surprising freedom from this complaint. Only 7 pupils out of 1,725 were marked as affected. The proportion of boys suffering from adenoids was, however, high, namely, 74. Bombay ranked next with 47 pupils in whom adenoids were detected.

(iii) The number of boys suffering from disabilities (grouped in columns 13, 14 and 15 of the statement) such as general debility, malnutrition and other diseases or malformations was a fairly large one. Out of the total of 6,574 examined, 472 were shown to be suffering from malformations and other similar complaints, 153 from general debility and 398 from malnutrition. Schools in Ahmedabad, Dharwar, Kanara District and Bombay City showed a large proportion of these diseases.

(iv) 576 pupils altogether were found to be suffering from skin diseases or a per cent. of 8·7. Kanara and Dharwar Districts showed the largest numbers; next in order of incidence was Ahmedabad.

(v) Decayed teeth were found in 362 pupils, Bombay City school children being responsible for nearly two-thirds of that number. Out of 128 boys suffering from oral sepsis, the largest number, *viz.*, 63, was found also in Bombay schools.

(vi) Malaria was reported to be an almost general complaint and a frequent cause of absence of children from schools; yet the number of enlargement of spleens detected was small. For 3 schools in Thana, 6 in Bombay City and 1 in Dharwar the splenic index was very high, *viz.*, 21·0, 28·3 and 1·00, respectively.

(vii) Defective hearing mostly resulting from chronic disease was noticed among 107 pupils, 40 of these being school-children in Bombay City, 26 in Ahmedabad and 22 in Thana.

(viii) Pupils with physical deformities numbered 106 out of the total of 6,574 pupils examined and nervous defects were found in 83. Bombay City school boys were responsible for 60 of the former and 32 of the latter. The interpretation of the heading nervous defects by the Inspectors was evidently not uniform as a school of 183 boys in Belgaum district was returned as having 26 boys in that category. Only a small number of boys were returned under the headings Mental Deficiency, Heart Disease and Disease of the Lungs.

(ix) Cases of tubercular enlargement of glands numbered only 48 for the Presidency, Bombay City schools having 13 pupils affected with that disease, Dharwar 11 and Thana 10.

(x) 302 school children were found to be unprotected from Small-pox. Dharwar and Kanara Districts and Bombay City showed a large number of such pupils.

Sind.—The reports in the case of Sind were submitted to the Assistant Director of Public Health, from whose review the following is extracted :—

Eleven schools were inspected by the Medical Inspector, 3 in Karachi, 3 in Hyderabad, 3 in Larkana and 2 in Shikarpur. The total number of boys present during the days of inspection was 2,551 out of whom only 1,339 were examined. No reasons are given for the unwillingness of the remaining 1,212 to submit to examination.

The incidence of Malaria, as was to be expected, is greater than amongst the school boys in the Presidency. Tubercular glands, physical deformities, defective teeth and the group malnutrition, debility and malformations, are also proportionately high.

Further remarks of the Assistant Director of Public Health may be quoted as written by him :—

"The Medical Inspector shows that 27 per cent. of school-going population in Sind is affected with tuberculosis of some form or other. Similarly, Malnutrition is 31 per cent., Adenoids and Tonsils 43 per cent., Skin Diseases 5, Physical deformities 17, Defective eye-sight 28, Teeth 31, Defective hearing and Ear diseases 12 per cent. and Enlarged spleen 5 per cent. The percentage of enlarged spleens found is, however, smaller than I have noticed for all children" (including those not attending school).

"It would be desirable to classify the children examined according to age periods and also according to various castes and communities so that on the results observed, efforts of preventive medicine might be directed to ameliorate conditions. I might express my view that school medical inspection being essentially a part of preventive medicine should be considered as a branch of Public Health Department."

Personal Proceedings.

115. The activities of the officers in charge of the Public Health Laboratories are detailed above.

The Assistant Directors of Public Health visited 617 towns and villages during the year and made reports on many.

In Western Registration District, Dr. Jamshyd Munsiff was in office upto 18th November 1921 when he went on sick leave and Lieut.-Colonel J. H. McDonald, I.M.S., Civil Surgeon, Nasik, took over the charge in addition to his own duties. The Assistant Director of Public Health gave advice in public health matters in 11 towns and visited 37 towns for general sanitary purposes and 43 for vaccination. The Inspectors of Sanitation and Vaccination wrote in 22 Village Sanitary Inspection Books.

The office of the Assistant Director of Public Health, Guzerat Registration District, was held by Dr. R. V. Shiveshwarkar, B.A., M.B.B.S., D.P.H., throughout the year. He gave advice on public health matters in 24 towns and visited 28 towns for general sanitary purposes and 186 for vaccination. 12 Village Sanitary

Inspection Books were written up by him personally and 121 by the Inspectors. 9 Rain-gauges and 11 dispensaries were also inspected by the Assistant Director.

Dr. R. D. Dalal, D.P.H., held charge in the Southern Registration District throughout the year. He gave advice in general public health matters to 39 town authorities and in 137 for vaccination purposes. He visited festival centres as already noted. Remarks were entered by him in 7 Village Sanitary Inspection Books, while the Inspectors of Sanitation and Vaccination wrote in 83 books.

Dr. Accacio da Gama was in charge of the office of the Assistant Director of Public Health, Central Registration District; he gave advice in public health matters to 7 towns and visited 13 towns for general sanitary purposes and 40 for vaccination. At Sholapur he investigated the question of mortality amongst the industrial population. He made a complete sanitary survey of Panchgani. He visited Newasa to enquire into the progress of Influenza and Lonavla in connection with Malaria. The selection of sites for and supervision of the famine relief camps in Ahmednagar district engaged his close attention for part of the year. He attended the fairs of Pandharpur, Alandi and Bhimashankar. 58 Village Sanitary Inspection Books were written up in his Registration District—two by the officer personally.

Dr. J. L. Pinto, D.P.H., was in charge of the office of the Assistant Director of Public Health, Sind Registration District, throughout the year. He gave advice to 31 towns in public health matters and visited 4 towns for general sanitary purposes and 211 for vaccination purposes. He delivered the course of lectures in Sindhi to the students at the Hyderabad Medical School required for their curriculum. Similar courses were given by Drs. da Gama and Shiveshwarkar at the Schools in Poona and Ahmedabad.

The office of the Director of Public Health for the Government of Bombay was held by Lieut.-Colonel H. Melhuish, D.S.O., I.M.S., from 1st January to 26th April 1921 and thereafter by the undersigned. During the year 29 towns were visited in connection with Inspection of water-supplies, drainage and for general sanitary purposes. In July the undersigned attended the Committee appointed for the selection of site for a quarantine station at Bombay. He was also present at the Alandi Fair and at the Kartiki Fair, Pandharpur, in November.

W. O'S. MURPHY, D.P.H.,
Lieut.-Colonel, I.M.S.,
Director of Public Health.

Poona, 3rd August 1922.

APPENDIX I.

ANNUAL REPORT OF THE SANITARY BOARD, BOMBAY PRESIDENCY; FOR THE YEAR 1921.

During the year under report there was no change in the constitution of the Board.

2. Three meetings were held and the following important subjects were dealt with :—

(1) The existing charges at the rate of 24 per cent. for Establishment, Tools and Plant on the maintenance of water supply and drainage installation and on the execution of contribution works carried out by Government.

(2) Poona main outfall sewer.

(3) The lowering of the water level of the Jamshedji Bund at Poona by 3 feet with the object of improving the Sanitary condition of the river particularly between the Potter's Dam and the Sangam.

(4) Depreciation funds in connection with water supply and drainage installations.

(5) The amendment of forms for Municipal water supply and drainage accounts.

(6) The method adopted in the preparation of financial forecasts for water supply and drainage projects.

(7) The Poona Municipality's proposal to stop pumping from 1st November 1921 and other suggestions in connection with the construction of outfall sewers and other works.

3. A grant of Rs. 50,000 only was placed at the disposal of the Sanitary Board. This amount was distributed to minor sanitary schemes by the Board after they had been arranged in order of desirability by the Director of Public Health. The amounts sanctioned were as under :—

	Rs.
Sind	10,564
Northern Division	10,820
Central Division	8,740
Southern Division	16,841
Total ...	46,965

The balance of Rs. 3,035 was surrendered.

Plans and estimates for several minor sanitary schemes were approved. It has been decided that in future all such schemes shall be referred for approval from a technical point of view to the Director of Public Health and the Sanitary Engineer

4. Grants-in-aid to local bodies under the head 24-B Sanitation or 33-Public Health were also directly sanctioned by Government to the following Minor Sanitary Schemes :—

Sehwan—Drainage scheme additional grant-in-aid of Rs. 2,827.

Vita—Water supply, advance for water supply scheme
Rs. 3,197
and Rs. 1,925

Kharda—Improvement to water supply, advance for water supply scheme Rs. 4,000.

5. (*a*). The detailed preparation of the following schemes was sanctioned :—

(1) Kalyan water supply

(2) Mahableshwar water supply

(*b*) The Board considered the financial aspect of the following fair projects and postponed their recommendation to Government of the usual 50 per cent. grant-in-aid until further assured of the projects being put on a sound financial basis by means of adequate charge for the supply of water :—

(1) Godhra water supply

(2) Borsad water supply

(3) Jacobabad water supply

6. The principal items of progress and the net expenditure incurred in connection with *Water Supplies* were as stated below:—

Sind.

Karachi.—A 30″ reinforced concrete pipe conduit at Dumlotte was commenced and completed for about ¾ of a mile. An oil Engine of 170 H.P. and a 15″ centrifugal pump at well No. 5 was installed and pumping commenced. Deepening of wells Nos. 3 and 5 was carried out and excavation for a new gallery for No. 5 well was commenced. Expenditure Rs. 2,43,000. These works were carried out by the Municipality without Government aid.

Hyderabad.—The work of new settling tanks at Gidu and providing an outlet conduit for them was completed. The construction of the new engine and boiler house at the Fort lift was nearly finished. Expenditure Rs. 54,989.

Sukkur.—The improvements to Sukkur water supply were in progress during the year. The principal items under construction were as under:—

(1.) New boiler house (2.) Precipitating and filter tanks (3.) Quarters for Engineers and Fitters and out-houses attached to same. Expenditure Rs. 1,34,895.

Northern Division.

Ahmedabad.—Two additional supply wells were constucted, one of which however was put out of use by heavy floods. In addition to these two further wells were in progress. Revetment piling in the river bed was put down with the object of diverting the stream towards the supply wells but was washed away during heavy floods. A chlorination tank was constructed but the work of chlorinating the supply has been deferred until increased storage for the chlorinated water and a Public Health laboratory are available. A number of small and corroded water mains were replaced by pipes of larger diameter and the local supply consequently improved. These works were carried out by the Municipality without Government aid. Expenditure Rs. 68,000.

Kharaghoda.—During the year under report improvements to the Kharaghoda Tank Feeder and its embankment and the water supply to new Pan area at Kharaghoda were in progress. Expenditure Rs. 1,126.

Central Division.

Ahmednagar.—6½ miles of the gravitation main were laid, this main being completed from the Pimpalgaon Tank to the service reservoir and from the reservoir to the King's gate at the entrance to the City. A compound wall round the service reservoir was constructed and a few small pipe connections made in the city. Expenditure Rs. 1,89,913.

Sholapur.—The only work done here during the year was the fixing of a Venturi Meter. Expenditure Rs. 1,095.

Barsi.—Some minor works such as building a masonry chamber for sluice valves, and stone pillars for supporting the 10″ main in nala beds were carried out. Rock cutting for the gravitation main in mile 6 was done from chainage 5/3600 to 5/4030 and from 5/5000 to 5/5280 at an average depth of 13 feet and a width of 8 feet. Expenditure Rs. 11,590.

Poona.—The construction of the new boiler and pump house for the Holkar's Bridge water supply at Kirkee was well advanced. Expenditure Rs. 35,375.

The laying of the water mains for the Koregaon Road estate was completed, with the exception of the Nalla crossings. Expenditure Rs. 1,43,959.

A new branch main was laid for the supply of the new Infectious Diseases Hospital. Expenditure Rs. 10,403.

New chemical tanks for the Poona City water supply were constructed at the Swar Gate Tanks. Expenditure Rs. 2,389.

The improvement of the hedge of the Mutha Right Bank Canal was carried out at the expenditure of Rs. 11,874.

Other minor works including new connections were carried out at the expenditure of Rs. 6,180.

Sirur.—Minor works such as completing the 6″ intake pipe, the cement concrete lining of the jack well and fixing sluice valve were completed. Expenditure Rs. 1,143.

Vita.—A trial well was excavated and this on the yield proving satisfactory was connected into a pacca infiltration well, with pump well and connecting trench. Expenditure Rs. 4,863.

Trimbak.—A house was constructed for the chlorinating plant and two cast iron service tanks were erected to provide additional storage capacity, with sluice valves, etc. The masonry service reservoir was roofed and other minor works carried out. Expenditure Rs. 9,545.

The road side stepwells between Nasik and Trimbak and private wells at Trimbak were converted into draw wells. Expenditure Rs. 3,771.

Southern Division.

Dharwar.—Works for the supply of the proposed Forest College were commenced, but were stopped under orders from Government, the machinery and pipes being transferred to other projects. Expenditure Rs. 50,702.

7. The principal items of progress and the net expenditure incurred in connection with *Drainage Schemes* were as under :—

Sind.

Karachi.—A new 12″ sewage main was laid in the Frere Town Quarter in connection with the development of Municipal land for building purposes. The installation of a new air compressor at the Central Station and of a new ejector at Khori garden was in progress. Expenditure Rs. 1,54,000. These works were carried out by the Municipality without Government aid.

Hyderabad.—Surface drains in certain localities were constructed. Expenditure Rs. 2,530.

Central Division.

Sholapur.—A combined drainage scheme for the King Edward Memorial Hospital and Head Quarters Police Lines was in progress. The excavation for the main and branch lines was completed and all the 9″ main and 6″ and 4″ branch pipes were laid, to a total length of 5,710 feet. Fifty-one manholes of different sizes including junction and disconnecting pits were constructed. Expenditure Rs. 19,542.

Nasik.—The Panchavati intercepting drain was completed, the work carried out during the year including the crossing at the Waghadi Nalla and a length of 300 feet of the drain beyond it, with minor items such as fixing C. I. covers, inspecting chambers, etc.

Pipe for carrying Indrakund water to Ramkund.—The excavation for the weir was carried to rock level, a length of 540 feet of 4″ stoneware pipe was laid and the excavation for the foundation for one of the inspection chambers was completed. Expenditure Rs. 6,899.

8. Eighty schemes were under investigation. Survey work was carried out in connection with the Poona Drainage Remodelling Scheme consisting of a gravitation outfall sewer completing the branch sewers in the sewered portion, main and branch sewers in District No. III, outfall pumping station, disposal works, etc. Plans and estimate for a trial length of 100 feet of the outfall sewer were prepared and sanctioned by Government but the work is held over pending allotment after the acceptance of the scheme in general by the Municipality.

9. The progress of *Boring operations* in the Presidency was as under :—

Bavla.—A second bore of 8″ diameter was started at the request of the people there and has been taken to a depth of 429 feet.

Drigh Road.—A G. O. drill was sent to Drigh Road near Karachi at the request of the Military Authorities for the purpose of sinking shallow bores 200 feet deep to ascertain the subsoil water supply in connection with the proposed well for the aerdrome. A bore of 3½″ was taken to a depth of 107 feet where a small supply was tapped.

Ahmednagar.—A G. O. Calyx drill was sent to Ahmednager at the request of the Superintendent, Remount Depot, to determine the subsoil conditions of water in the existing well at the depot. Three bores of 80 feet deep were taken in trap rock which proved the existence of a good water supply.

Dhrangdhra.—An A. B. rotary drill was lent to Dhrangdhra State in Kathiawar in connection with the local water supply. A bore of 12″ diameter was taken to a depth of 768 feet. At a depth of 395 feet a small artesian water supply was met with which increased in quantity when boring reached a depth of 493 feet.

Godhra.—A G. O. plant was sent to Godhra at the request of the distillery contractors for augmenting the water supply in the distillery well. A 3″ diameter bore was taken to a depth of 150 feet below the bottom of the well. No water was tapped, the strata passed through consisting of hard white rock. The work was therefore stopped.

Gidhar.—A G. O. Calyx plant was sent to Gidhar 7 miles from Nardhana for the purpose of investigating the nature and levels of the rock foundations for the proposed bridge on the Bombay Agra Road on the Tapti River.

Gogha.—The eight inch boring started in 1915 by a F.1 drill was taken to a depth of 445 feet and was then stopped as this plant had reached its limit. A B. F. plant was made available and the bore was taken to a depth of 812 feet. At this point a supply of

salt water of 350 gallons per minute was met with. Further boring was stopped as a supply of inflammable gas was tapped; the nature of this is being investigated.

Kotri.—A. G. O. drill was sent to Kotri for the purpose of augmenting the present supply in the distillery well. A bore near the well was taken to a depth of 50 feet during the year.

Malir.—Two G. O. Calyx drills were worked out at Malir with the object of investigating, by means of test bores in the Malir River valley, the subsoil conditions in connection with the proposal to extend the Karachi water supply conduit towards Dumlotte. About 20 borings 60 to 80 feet deep were put down for this purpose, and the existence of an underground supply sufficient for the needs of Karachi demonstrated.

Nadiad.—The 10″ diameter bore at Nadiad was continued from 680 to 690 feet; at which depth it was found necessary to stop the driving of the 10″ pipe. A 6″ bore was continued to a depth of 820 feet. The work is in progress.

Sanand.—A. B. F. plant was taken to Sanand at the request of the Darbar in the hope of obtaining a potable water supply. A 9″ diameter bore is in progress, a depth of 135 feet having been reached.

10. During the year under report, the Sanitary Engineer made tours over the greater part of the Presidency including Sind and gave advice to the local bodies. Several schemes already sanctioned and others awaiting sanction are held over for want of funds; most, if not all, of these projects are urgently needed for the improvement of the sanitary conditions and the health of the towns concerned, and it is hoped that funds will be made available at an early date to enable works to be carried out in a number of towns both in the Presidency proper and in Sind, the sanitary condition of which is at present truly deplorable.

A. P. MADDOCKS, B.Sc., M.Inst.C.E.,

Secretary, Sanitary Board, Bombay Presidency.

APPENDIX II (*a*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31st DECEMBER 1921.

I. Summary.

The following summary shows the inspection and disinfection work done in the Port of Bombay in connection with out-going and incoming vessels as well as those lying in the harbour and docks during the year ending 31st December 1921.

One thousand and ninety four vessels of all classes with 1,99,595 crew and passengers were examined during the year. The number of troops examined by the Military Embarkation Medical Staff is not included amongst passengers.

The clothing and bedding and other articles of 93,504 members of crew and passengers of out-going and incoming vessels and of members of crews of vessels lying in the Port were disinfected. Of these 76,478 were Asiatic and African members of crews, third class or deck European and Indian passengers, 7,348 were pilgrims who left the Port of Bombay for ports out of India and 9,678 were members of crews and passengers who arrived by vessels on which cases of infectious diseases had occurred during the voyage or while in the port. In addition to the above-mentioned numbers 2,538 baggage coolies and some stevedores men were disinfected in order to enable certain vessels to work cargo for a few hours after medical inspection and disinfection of their crews and passengers.

Sixty-two vessels on which cases of infectious diseases occurred were disinfected. Out of the 12 vessels which carried pilgrims to Jeddah 10 were thoroughly cleansed and freed from rats by means of Sulphur dioxide gas generated in the Port Clayton Apparatus. The remaining two pilgrim ships were fumigated by their own apparatus which was provided on board the vessel. Besides the 12 out-going pilgrim ships 14 other vessels were fumigated. In addition to this number 20 vessels were fumigated by the British India Steam Navigation Company's apparatus. Eighty-seven persons who had been in contact with Smallpox were vaccinated. In addition to this number 6,877 out-going pilgrims were vaccinated by a special Vaccinating Staff lent by the Municipality under the direction of the Police Commissioner.

II.—Out-Going Vessels.

2. In accordance with Government Notification, General Department, No. 1713, dated the 15th March 1917, the medical examination of all vessels, crews and passengers, proceeding to ports out of India, and the disinfection of the clothing and bedding of all Asiatic and African members of crews, of all passengers travelling third class who were not provided with cabin accommodation, of fourth class and deck passengers and of all Asistic and African servants who sailed on such vessels were carried out before they left the Port of Bombay.

3. Nine hundred and ten outward bound vessels with 1,01,562 crew and 53,659 passengers or a total of 1,55,221 persons, exclusive of troops who were examined by the Military Embarkation Medical Staff, were inspected as against 893 vessels with 1,02,800 crew and 73,279 passengers or a total of 1,76,079 persons during the preceding year.

4. The bedding, boxes and suspected articles of clothing, etc., of 57,917 Asiatic and African members of crews, of 18,561 third class, fourth class and deck passengers and of 7,348 pilgrims who sailed on steamers bound for Ports out of India were disinfected.

5. In the case of two outgoing steamers the West African members of the crew refused to come ashore and have their effects disinfected according to Rule 44 (1) (c) of the Rules prescribed under Government Notification, General Department No. 1713, dated 15th March 1917. They were prosecuted by the Commanders of the vessels to which they belonged and were convicted and sentenced to terms of from 14 days to 4 weeks rigorous imprisonment, by the Chief Presidency Magistrate.

6. A few vessels while in the docks failed to observe the rules laid down by Government which are aimed at preventing rats obtaining access to vessels. Paragraph 2 of the Plague Certificates attached to their Bills of Health (which certifies that the precautions prescribed for adoption in the Port of Bombay to prevent the imgress of rats into ships have been duly observed) was accordingly deleted at the time of departure.

7. A few vessels had cases of Smallpox, Measles and Chickenpox among the crews and passengers within 12 days prior to their departure from this Port. The Bills of Health granted to these mentioned the diseases which had occurred on Board as well

as the measures which had been taken before their departure for the prevention of the spread of infection on board or its introduction at other Ports.

8. The Surgical and Medical equipment was inspected during the year-*vide* Rule 11 (1) C of the Native Passenger Ships Act X of 1887 as amended by the Government of India Notification No. 264-44c, dated Delhi, 15th January 1916.

III.—Incoming Vessels.

9. In accordance with the rules prescribed under Government Notification, No. 1713, dated the 15th March 1917, Medical inspection and disinfection of vessels which were actually infected or suspected of being infected were carried out. All Pilgrimships and all vessels which arrived from East African Ports were also inspected on arrival.

10. One hundred and sixty in-coming vessels of various kinds with crews aggregating 17,914 persons and 24,545 passengers and pilgrims were inspected during the year. Of the 160 vessels 38 including Hired Transports and Hospital Ships were found to have had cases of infectious diseases on board at the time of arrival or during the voyage. On these vessels were 4 cases of Plague, 16 cases of Smallpox, 12 cases of Measles, 13 cases of Chickenpox, 7 cases of Jigger, 4 cases of Scarlatina, 9 cases of Pneumonia and 351 cases of mild influenza. The cases of influenza were mostly confined to troops on board two transports—the s. s. "Scotian" and the s. s. "Derbyshire" and to a less extent to the members of crews. The cases of other infectious diseases as enumerated above which occurred among the troops were disposed of by the Military Authorities on landing in Bombay and those among the crews by the Port Health Officer. The cases which occurred among the troops were removed to the Military Hospitals on shore for treatment, those detected among the European crews to St. George's Hospital and those among the Asiatic and African Members of crews to the J. J., G. T., Arthur Road and Maratha Hospitals. The ships and the clothing and bedding of their crews were disinfected. Twelve vessels with 5,827 pilgrims arrived from Jeddah. One of them had a fatal case of smallpox during the voyage.

IV.—Infectious Diseases on Vessels Arriving and departing and in the Harbour and Docks.

11. Tabular statement No. 1 gives the number of cases of infectious diseases which occurred on vessels arriving, departing and in the harbour.

It will be seen that 78 cases occurred on vessels arriving as follows :— Four cases of plague, 16 cases of smallpox, 12 cases of measles, 13 cases of chickenpox, 7 cases of jigger, 4 cases of scarlatina, 13 cases of influenza, and 9 cases of pneumonia. Twelve cases of smallpox, 4 cases of chickenpox and 2 cases of influenza were reported to have occurred on vessels after departure and landed at Colombo, Aden and Mombassa.

12. Tabular statement No. 2 gives separately details of infectious diseases on vessels in the harbour and docks. The clothing and bedding of the crews of these vessels aggregating 1,915 persons were disinfected. The vessels on which plague cases had occurred were deratized by fumigation.

13. Under Government Notification, General Department, No. 1245 dated 2nd February 1920 "Acute Pneumonia" and "Influenza" have been declared as infectious diseases, in addition to those scheduled under the Indian Ports Act, *vide* Government Notification, General Department, No. 1713 dated the 15th March 1917.

14. Under Section 2 A of the Epidemic Diseases Act III of 1897 amended by the Act XXXVIII of 1920 the Port Health Officer has been empowered to adopt the same measures for the prevention of the spread of Cerebro Spinal Meningites by Maritime Traffic as are prescribed to prevent the spread of those diseases referred to in Part VI-A of Government Notification No. 1713, dated the 15th March 1917, *vide* Government Order, General Department, No. 5607, dated the 4th May 1921.

V.—Disinfection and Fumigation of Ships.

15. During the year under report 88 vessels of all classes were disinfected and fumigated.

16. Of the 88 vessels referred to in the foregoing paragraph 26 vessels were fumigated by means of the Clayton process. Of these 12 were outward-pilgrim vessels, 5 were rat infested, and 5 were fumigated under the regulations for plague. Four vessels infected with influenza were fumigated at the request of the Agents and Com-

manders of the vessels. In addition to these the British India Steam Navigation Company fumigated 20 steamers by their own apparatus. This number is not included in tabular statement No. 1.

17. The Port Disinfection Station received Every Monday clothing and bedding from various hospitals for disinfection. 738 bundles containing clothing and bedding of this kind were disinfected as against 364 bundles during the preceding year. The clothing of 2,538 baggage coolies to work cargo on outward bound vessels after the disinfection of their crew or after obtaining Bills of Health was disinfected at the request of their Commanders and Agents.

VI.—General Health of Shipping.

18. During the year under report 1,608 persons connected with the shipping were admitted into the various hospitals in the city. St. George's Hospital admitted 791 European patients, of whom 18 died, 743 were discharged cured and 30 remained under treatment after the 31st December 1921. The Jamsetjee Jijibboy Hospital admitted 321 Asiatic patients of whom 42 died and 236 were discharged cured; the Goculdas Tejpal Hospital admitted 446 Asiatics of whom 32 died and 355 were discharged cured; and the Arthur Road and Maratha Hospitals admitted 50 patients of whom 5 died and 45 were discharged cured.

19. No deaths occurred in connection with the cleansing of bilges of ships during the year. There were 303 accidents on board of vessels which were lying in the Harbour or Docks. Of these 50 proved fatal.

VII.—Red Sea Pilgrim Traffic.

A—Outward Pilgrim Traffic.

20. In accordance with the orders of the Government of India in force the Outward Pilgrim Traffic of the year under report began on the 12th April 1921. Before the Pilgrims embarked at Bombay the ships were thoroughly cleansed and freed from rats by means of the Clayton Process. The pilgrims were medically inspected and their clothing and bedding disinfected before they were allowed to embark.

21. The names of the ships, the numbers of pilgrims carried by them and the date on which they left Bombay for Jeddah *via* Karachi, with the exception of one which sailed direct for Jeddah, are given below :—

No.	Name of Vessel.	Number of Pilgrims sailed.	Date of Departure.
1	S.S. "Shustar"	748	1921 12th April *via* Karachi
2	S.S. "Homayun"	511	30th April ,,
3	S.S. "Zayani"	778	14th May ,,
4	S.S. "Jeddah"	484	17th May ,,
5	S.S. "Shustar"	472	21st May ,,
6	S.S. "Nurani"	458	31st May ,,
7	S.S. "Sultania"	856	16th June ,,
8	S.S. "Homayun"	374	16th June ,,
9	S.S. "Nairung"	733	24th June direct to Jeddah.
10	S.S. "Shustar"	540	25th June *via* Karachi.
11	S.S. "Jeddah"	807	1st July ,,
12	S.S. "Akbar"	587	12th July ,,
		7,348	

22. It will be seen that 7,348 pilgrims left during the season as against 18,008 pilgrims in the previous year.

23. The classification of pilgrims as far as it is obtainable is as follows :—

249	Bombay Presidency (including Sind).	176	Malay States.
244	Bombay City.	201	Dutch Settlement.
424	Madras Presidency.	380	Persia.
1,607	Bengal Presidency.	136	Mesopotamia.
115	Assam Province.	77	Russia.
44	Bihar and Orissa.	20	China.
1,343	Punjab and North-West Frontier.	45	French Settlement.
872	United Provinces and Oudh.	240	Afghanistan.
66	Central Provinces.	94	Baluchistan.
46	Rajputana.	199	Arabia.
67	Burma.	9	Africa.
16	Ceylon.	90	Unclassified.
588	Native States.		
5,681		1,667	

Total ... 7,348.

24. Six thousand Eight hundred and Seventy seven pilgrims were vaccinated before starting by a special Staff placed under the Police Commissioner by the Municipality. Besides these some pilgrims from other Provinces and Native States had been vaccinated before leaving their homes for Bombay.

25. The Quarantine Camp at Kamaran was opened during the pilgrim season under report. The necessary Medical and other staffs required for the camp and also for the Hospital at Jeddah were provided by the Surgeon-General with the Government of Bombay and they were despatched to Kamaran and Jeddah by pilgrim ships.

26. Twenty four deaths occurred at sea among pilgrims on out-going ships. They were chiefly due to old age, General Debility Pneumonia, Heart Disease and Diarrhœa.

B.—Inward Pilgrim Traffic.

27. During the year under report 5,825 pilgrims arrived from Jeddah in 12 vessels as tabulated in statement No. 3 which is appended to this report.

28. One hundred and forty-six deaths occurred among the pilgrims during the return voyage. The causes of deaths are chiefly attributed to Senile debility, Dysentery, Diarrhœa, Heart Disease, Privation, Enteritis, Pneumonia and Dropsy.

29. A death from smallpox occurred on one of the pilgrim ships during the return voyage.

VIII.—Sanitary State of the Harbour and the Foreshore.

30. The sanitary state of the harbour and of the various bandars, basins and docks was fair with the exception of the timber ponds at Sewri the sanitary condition of which is unsatisfactory.

IX.—Cholera, Smallpox, Plague and Influenzal Pneumonia in the City of Bombay.

31. During the year under report 70 deaths from Cholera, 406 deaths from Smallpox, 811 deaths from Plague, and 1,389 deaths from Influenzal Pneumonia occurred in the City of Bombay as against 119 deaths from Cholera, 294 deaths from Smallpox, 282 deaths from Plague and 1,605 deaths from Influenzal Pneumonia during the preceding year.

X.—General.

32. The undersigned was in charge of the Port Health Department throughout the year under report.

33. The members of the Medical, Clerical and Sanitary Police Staffs performed their duties satisfactorily. For his excellent and long service of 39 years, my head clerk, Mr. Ramrao Ganpatrao Kamalakar, was awarded the title of Rao Saheb on New Year's day 1922.

34. The services of a Commissioned Medical Officer and a Lady Doctor had to be requisitioned on a few occasions as usual, when work was unusually heavy.

W. M. HOUSTON, M.B., D.P.H.,
Lieut-Colonel, I.M.S.,
Health Officer of the Port.

Bombay Port Health Office,
New Customs House, dated 6th March 1922.

TABLE No. 1.

The following Tabular Statement gives a summary of the Shipping of the Bombay Port and the work done in connection therewith for the year ending 31st December 1921 :—

Vessels including Country craft.	Number of vessels inspected.	Number of persons inspected.	Number of Asiatic African and Crew and 3rd Class or Deck Passengers disinfected.	Number of Vessels.		Number of persons vaccinated.	Diseases and cases of each.								
				Disinfected.	Fumigated.		Plague.	Cholera.	Smallpox.	Measles.	Chickenpox.	Jigger.	Scarlatina.	Influenza.	Pneumonia.
Entered ...	160	42,459	7,763	38	...	...	4	...	16	12	13	7	4	13	9
Left ...	910	155,221	83,826	...	26	6,877	...	...	12	...	4	...	...	2	...
In harbour during the year.	24	1,915	1,915	24	...	87	2	6	5	4	4	...	...	2	4
Total ...	1,094	199,595	93,504	62	26	6,964	6	6	33	16	21	7	4	17	13
Total for 1920 ...	1,066	237,219	106,476	60	31	17,319	2	16	19	74	31	1	6	3	...

TABLE No. 2.

The following table includes all Steam Ships, Square-rigged vessels and Native sailing Craft which became infected while lying in the Port of Bombay during the year 1921 :—

Months 1921.	Number of persons who were infected with infectious disease in the Docks and Bunders.		Total number of infected vessels.	Total number of infectious diseases in the Bombay Harbour.						Number of crew disinfected.
	Plague.	Cholera.		Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Influenzal Pneumonia.	
January ...	...	...	2	...	...	...	...	...	2	14
February...	...	...	3	...	...	1	1	...	1	359
March ...	...	...	1	...	...	1	...	...	1	120
April ...	2	...	5	2	...	2	1	...	1	614
May ...	...	...	1	...	...	...	...	2	...	92
June ...	...	...	2	...	...	...	1	1	...	119
July ...	...	2	2	...	2	...	...	...	...	12
August ...	...	2	3	...	2	...	...	...	1	158
September ...	...	2	3	...	2	...	...	1	...	217
October ...	...	...	...	...	...	...	...	...	...	...
November ...	...	...	1	...	...	...	1	...	...	120
December ...	...	...	1	...	...	1	...	...	...	90
Total ...	2	6	24	2	6	5	4	4	6	1,915

TABLE No. 3.

Statement showing the number of pilgrims who arrived in Bombay from Mecca by vessels during the year 1921.

No.	Name of Ship.	Date of arrival.	Number of Crew inspected.	Number of Pilgrims inspected.	Number of deaths during voyage.	Number of cases of infectious disease on board.		Remarks.
						On arrival.	During voyage.	
		1921.						
1	S.S. "Akbar" ...	6th September ...	122	347	14	...	...	
2	S.S. "Zayani" ...	7th do. ...	93	314	19	...	...	
3	S.S. "Jeddah" ...	7th do. ...	126	666	24	...	...	
4	S.S. "Nairung" ...	8th do. ...	109	11	8	...	...	
5	S.S. "Shuja" ...	9th do. ...	109	498	31	...	...	
6	S.S. "Sultania" ...	11th do. ...	103	455	5	...	...	
7	S.S. "Nurani" ...	14th do. ...	108	184	9	...	1 Small-pox (died).	
8	S.S. "Koweit" ...	15th October ...	108	1,019	9	...	...	
9	S.S. "Homayun" ...	26th do. ...	101	38	9	...	...	
10	S.S. "Jeddah" ...	8th November ...	128	1,479	14	...	...	
11	S.S. "Nairung" ...	4th December ...	110	680	3	...	...	
12	S.S. "Hwahzeh" ...	14th do. ...	72	136	1	...	...	
		Total ...	1,289	5,827	146	...	1	

APPENDIX II (*b*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF KARACHI FOR THE YEAR ENDING 31ST DECEMBER 1921.

I.—OUTGOING VESSELS.

During the year under report 378 steamers outward bound for ports out of India were medically inspected and given Bills of Health by the Health Officer of the Port.

Of this number 173 vessels were proceeding to Aden, the Red Sea and Europe, and 205 to other ports out of India including the Persian Gulf.

Bills of Health were also granted after medical inspection to 533 country boats.

In accordance with the Port Health Regulations issued by Government, the Indian crews as well as deck and third class passengers of all steamers and country boats proceeding to Ports out of India were medically inspected and their clothing, bedding and other articles disinfected at the Port Disinfecting Station, Kiamari, prior to their departure from the Port of Karachi.

II.—INCOMING VESSELS.

During the year under report 52 steamers arrived in the harbour in quarantine, and were duly inspected on their arrival.

Of these 52 vessels, 16 arrived from East African Ports, 7 from Jeddah *via* Aden, and the remaining 29 hailed from various other ports.

Nineteen country boats, also arrived here in quarantine from East African Ports and were duly inspected on arrival.

III.—SYNOPSIS OF INSPECTION AND DISINFECTION PERFORMED.

The following tabular statement shows the number of vessels, crews and passengers inspected during the year under report :—

	Vessels.			Crews and Passengers.		
	Steamers.	Country boats.	Total.	Of steamers.	Of country boats.	Total.
Incoming	52	19	71	21,582	253	21,835
Outgoing	378	533	911	109,015	7,090	116,105
					Grand Total ...	137,940

Of these 137,940 persons (crews and passengers) who were medically inspected on their arrival at, or departure from, the Port of Karachi, 42,964 persons (crews and passengers) also had their clothing, bedding and other articles disinfected.

IV.—MISCELLANEOUS DISINFECTION.

Throughout the year the clothing and bedding of patients suffering from infectious diseases, as well as the clothing and bedding of contacts, which were received for disinfection from the Epidemic Diseases Hospital, the Civil Hospital and other Institutions in Karachi, also from private individuals, were duly disinfected by saturated steam under pressure in the Equifex stoves of the Port Disinfecting Station, Kiamari.

In addition to the above, a large number of articles, such as mattresses, blankets, pillows, pillow-covers, sheets, towels, shirts, trousers, jackets, pyjamas, etc., which were sent for disinfection from the Embarkation Department, Kiamari, the Military Clothing Depôt, Karachi, the Epidemic Diseases Hospital, and the Health Officer of the Karachi Municipality were duly disinfected at the Port Disinfecting Station during the year under report.

V.—PLAGUE.

No cases of this disease occurred amongst the shipping during the year under report but the S. S. "Lightning" which called here en route to Bombay from the Persian Gulf reported that a case of plague amongst the Goanese saloon crew—which subsequently proved fatal—had been sent ashore to hospital at Muscat. The necessary precautionary measures were taken on board, and no further cases of plague occurred.

VI.—Cholera.

One case only occurred on board a vessel, the S. S. "Nerbudda," at the wharf; and one vessel, the S. S. "Barpeta", calling at Karachi en route from the Gulf to Bombay, reported the death from cholera of a deck passenger during the voyage between Gwadir and Karachi. In both cases precautionary measures were duly carried out on board, and no further cases of cholera occurred.

VII.—Small-pox.

Two cases of small-pox occurred, one on the S. S. "City of Genoa", and the other on the S. S. "Sultania". The necessary precautionary measures (removal of patients to hospital, vaccination, disinfection, etc.) were promptly carried out, and no further cases occurred on board the vessels concerned.

In addition to the above, the S. S. "Lightning" and the S. S. "Nurani" which called at Karachi en route from the Persian Gulf to Bombay, reported three cases of, and one death from, small-pox, respectively, among the deck passengers on board, during the voyage to Karachi. The necessary precautionary measures on board were duly carried out at this port, and no further cases of small-pox occurred.

VIII.—Chicken-pox.

Two cases of this disease occurred amongst the shipping, *viz.*, one case amongst the troops, on board the S. S. "Varela" and the other amongst the Indian crew of the S. S. "Worsley Hall". The usual precautionary measures (removal of patients to hospital disinfection, etc.) having been carried out, no more cases occurred on board.

IX-XIV.—Measles, Parotitis (Mumps), Yellow Fever, Jigger, Sleeping Sickness, Scarlet Fever.

No cases during the year.

XV.—Influenza.

During the year eleven cases of influenza amongst the Indian crew of the S. S. "Kandhar" were removed to hospital for treatment, and the necessary prophylactic measures taken on board in connection with the same. No further outbreak occurred.

XVI.—Non-Notifiable Diseases.

During the year under report several cases of acute illness of all sorts (fever, dysentery, pneumonia, etc.) were detected in the course of the usual medical inspection of crews and passengers, and were duly sent to the Civil Hospital, Karachi, for treatment.

Seven cases of leprosy amongst the military units which disembarked from the S.S. "Coconada" were duly isolated and taken charge of by the Military Medical Authorities.

XVII.—Deaths from Non-Notifiable Diseases.

During the year several deaths from various causes (e. g., malarial fever, pneumonia, heart failure, senile debility, etc.) were reported as having occurred on board of vessel either in Karachi harbour, or during the voyage from other ports to Karachi.

XVIII.—Emigrants.

No emigrants embarked from this port during the past year.

XIX.—Red Sea Pilgrim Traffic.

A.—Outward Pilgrim Traffic.

In accordance with the instructions of Government, the Port of Karachi was open for the embarkation of Mahomedans going on pilgrimage to Mecca *via* Jeddah, and eleven ships carrying 3,477 pilgrims, who embarked at Karachi, sailed hence for Jeddah *via* Aden during the Haj season of 1921.

The number of pilgrims who sailed from Karachi during the previous Haj season was 4,081.

Before they were allowed to embark the pilgrims were medically inspected and their clothing and bedding disinfected at the Port Disinfecting Station, Kiamari.

The names of the ships, the number of pilgrims carried by them and the dates on which they sailed from Karachi for Jeddah, are given below in tabular form:—

No.	Name of vessels.	Number of Pilgrims.	Date of departure.
1	S.S. "Shushtar"	68	16th April 1921.
2	S.S. "Hamayun"	358	3rd May Do.
3	S.S. "Zayani"	229	17th Do. Do.
4	S.S. "Jeddah"	346	22nd Do. Do.
5	S.S. "Shushtar"	337	25th Do. Do.
6	S.S. "Nurani"	274	4th June Do.
7	S S. "Hamayun"	553	20th Do. Do.
8	S.S. "Sultania"	589	20th Do. Do.
9	S.S. "Shushtar"	274	30th Do. Do.
10	S.S. "Jeddah"	327	5th July Do.
11	S.S. "Akbar"	122	19th Do. Do.
	Total ...	3,477	

B.—Inward Pilgrim Traffic.

The following table shows the number of pilgrims who returned to Karachi from Jeddah, the names of the ships in which they travelled, and other particulars :—

No.	Name of vessels.	Date of arrival.	No. of crew.	No. of pilgrims for Karachi.	No. of deaths during voyage.	No. of cases of infectious disease during voyage or on arrival.
1	S.S. "Akbar"	3-9-1921	122	697	12	*Nil.*
2	S.S. "Zayani"	4-9-1921	93	584	17	*Nil.*
3	S.S. "Jeddah"	5-9-1921	126	514	22	*Nil.*
4	S.S. "Nairung"	5-9-1921	109	754	8	*Nil.*
5	S.S. "Shuja"	6-9-1921	125	502	30	*Nil.*
6	S.S. "Nurani"	10-9 1921	108	391	9	1
7	S.S. "Hamayun"	24-10-1921	101	724	9	*Nil.*
		Total ...	784	4,166	107	1

In all 4,166 pilgrims returned to Karachi during the pilgrim season of 1921, whereas the number of pilgrims who returned to Karachi during the previous Haj season was 3,605.

Only one case of infectious disease—viz., a fatal case of small-pox on board the S. S. "Nurani"—occurred amongst the pilgrims returning from the Haj to Karachi, during the year under report.

The one hundred and seven deaths which occurred at sea among the pilgrims returning from the Haj to Karachi were reported, by the Medical Officers of the ships concerned, as being due to old age, general debility, bronchitis, chronic malaria, diarrhoea, maramus, phthisis, heart failure, etc.

XX.—Clayton Apparatus.

During the year under report four steamers were claytonised (fumigated) by means of the Clayton Disinfecting Apparatus before sailing from Karachi for ports out of India.

XXI.—Sanitary State of the Harbour.

The sanitary state of the harbour was satisfactory.

XXII.—Plague, Cholera and Small-Pox in the City of Karachi.

During the year under report 54 deaths from plague, 160 deaths from cholera and 37 deaths from small-pox occurred in the city of Karachi as against 310 from plague, nil from cholera and 72 from small-pox during the previous year.

XXIII.—General.

The undersigned was in charge of the Port Health Department from 1st to 27th January and again from 28th May to 31st December 1921. The Assistant Port Health Officer, (Assistant Surgeon B. F. Khambatta) held officiating charge from 28th January till 27th May, during undersigned's absence on leave.

The following list shows the names of the Medical Staff who did duty under the Health Officer of the Port during the year: —

Names.	Period of service.		
	Y.	M.	D.
Assistant Surgeon B. F. Khambatta, M.B., B.S. ...	0	9	25
do. do. J. E. Howard, I.M.D. ...	0	2	6
Sub-Assistant Surgeon Baharsing Toursing Advani ...	1	0	0
Mrs. Lake, Nurse-Inspectress ...	1	0	0

Assistant Surgeon B. F. Khambatta was transferred to the Civil Hospital at Hyderabad, Sind, on 25th October 1921, and Assistant Surgeon J. E. Howard, I.M.D., was appointed in his place.

The above-mentioned Medical Staff carried out their duties tactfully and efficiently.

The clerk, Mr. Mahomed Jaffer Sheikh Ibrahim, performed his duties with zeal and the members of the Steam-Launch, Disinfecting Station, Clayton Apparatus Establishments also worked satisfactorily.

H. CAREY VENIS, D.P.H.,
Health Officer of the Port of Karachi.

Port Health Office,
Kiamari, Karachi, dated 25th March 1922.

APPENDIX II (c).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF ADEN FOR THE YEAR 1921.

I. General Remarks.

One thousand one hundred and sixty two vessels and rigged vessels were granted bills of health during the year.

Of the above number 923 were sailing under the British flag and 239 under Eoreign flags.

Bills of health issued to vessels having had cases of infectious diseases on board were annotated according to the circumstances of each case.

One thousand and eleven bills of health were granted to Dhows during the year.

The accompanying table A gives a list of vessels on board of which infectious diseases existed on arrival. In the case of these vessels all sanitary precautions were taken to prevent the spread of the disease.

The following cases of infectious diseases were landed from the shipping.

Small-pox	...	12	Chickenpox	...	3
Measles	...	0	Influenza	...	8
Pneumonia	...	2			

II. Pilgrim Traffic.

24 ships carrying pilgrims passed through the port during the year. All were medically examined; but they were not granted pratique.

Year.	No. of ships.	No. of pilgrims.	No. of deaths.
1921	24	21,252	51.

Table A.

The following is the list of vessels on board of which cases of infectious existed on arrival at this port during the year.

Date.	Name of Ship.	Nationality.	From.	To.	No. of cases.	Remarks.
10th January 1921 ...	S. S. Nardana ...	British ...	Calcutta ...	London ...	1 Infl.	Landed.
10th February 1921 ...	S. S. Kaisari-Hind ...	,, ...	Bombay ...	,, ...	1 S. P.	,,
12th February 1921 ...	H. T. Answald ...	,, ...	,, ...	Suez ...	1 C. P.	Landed.
Do. ...	S. S. Franz Ferdinand.	,, ...	Karachi ...	,, ...	1 Pneumonia.	,,
23rd February 1921 ...	S. S. Novara ...	,, ...	London ...	Calcutta ...	1 Infl.	Not landed.
26th Feb uary 1921 ...	S. S. China ...	,, ...	,, ...	Bombay ...	1 Mls.	,,
1st March 1921 ...	H. M. T. Oratava ..	,, ...	Sea ...	Suez ...	,,	,,
5th March 1921 ...	R. I. M. S. Dufferin ...	,, ...	Bombay ...	,, ...	2 S. P.	Landed.
6th March 1921 ...	R. I. M. S. Hardinge .	,, ...	,, ...	,, ...	1 S. P.	,,
28th March 1921 ...	H. M. T. Edward Woerman.	,, ...	Karachi ...	,, ..	4 S. P.	,,
30th March 1921 ...	S. S. Narkunda ...	,, ...	Bombay ...	London ...	1 C. P.	,,
13th May 1921 ...	S. S. Ischia ...	Italy ...	,, ...	Suez ..	2 S. P.	,,
1st June 1921 ...	S. S. Caledonia ...	British ...	,, ...	London ..	1 Mls.	Not landed.
10th June 1921 ...	H. T. Varseva ...	,, ...	Suez ...	Bombay ...	1 C. P.	* Landed.
9th July 1921 ...	S. S. Umzinto ...	,, ...	Perim ...	Durban ...	1 Pneumonia.	Landed.
19th August 1921 ...	S. S. Novara ...	,, ...	Bombay ...	London ...	2 Infl.	,,
7th October 1921 ...	S. S. Homayun ...	,, ...	,,	Jeddah ...	1 S. P.	,,
29th October 1921 ...	H. M. T. Huntsand ...	,, ...	Karachi ...	Southampton .	1 Mls.	Not landed
1st December 1921 ..	S. S. Dara ...	,, ..	Basra ...	Bahrein ...	5 Mls.	,,
19th December 1921 ...	H. T. Scolian ...	,, ...	Southamptom .	Bombay ...	5 Infl.	* Landed.
23rd December 1921 ...	S. S. Akbar ..	, ...	Basra ...	Batoum ...	1 Mls.	Not landed.
24th December 1921 ...	S. S. British Isles ...	, ...	Abadan ...	Swansea ...	1 S. P.	Landed.

N. B.—C. P. Stands for Chickenpox, Infl. for Influenza, S. P. for Small-pox and Mls. for Measles.

* Denotes the cases landed and treated by the Military Authorities in Aden.

The following are the names and other information regarding the pilgrim ships which passed through Aden, during the year under report :—

Date.	Names of ships.	Nationality.	From	To	Number of		
					Pilgrims.	Infectious cases.	Deaths.
13th January 1921 ...	S. S. Koweit ...	British ...	Jeddah ...	Bombay ..	316	..	1
24th April 1921 ...	,, Shustar ...	,, ...	Bombay ...	Jeddah ...	807	...	...
10th May 1921 ...	,, Homayun ...	,, ...	,, ...	,, ...	871	...	...
25th May 1921 ...	,, Zayani ...	,, ...	Bombay *viâ* Karachi.	,, ...	1,006	...	1
29th May 1921 ..	,, Jeddah ...	,, ...	Bombay ...	,, ...	827	...	...
2nd June 1921 ...	,, Shustar ...	,, ...	Bombay *viâ* Karachi.	,, ..	808	...	1
13th June 1921 ...	,, Nurani ...	,, ...	Bombay and Karachi.	,, ...	734	...	1
18th June 1921 ...	,, Koweit ...	,, ...	Muscat ...	,, ...	440	...	1
28th June 1921 ...	,, Homayun ...	,, ...	Bombay and Karachi.	.....	931	...	...
29th June 1921 ...	,, Sultania ...	,, ...	Karachi ...	.....	1,443		1
4th July 1921 ...	,, Nairang ...	,, ...	Bombay ...	Jeddah *viâ* Kamaran.	770	...	1
9th July 1921	,, Shustar ...	,, ...	Bombay *viâ* Karachi.	Jeddah ...	813	...	1
14th July 1921 ...	,, Jeddah ...	,, ...	Bombay ...	.....	1,185	...	2
27th July 1921 ...	,, Koweit ...	,, ...	Muscat ...	Jeddah ...	1,072	..	10
29th July 1921 ...	,, Akbar ...	,, ...	Bombay *viâ* Karachi.	... ..	737	...	...
1st August 1921 ...	,, Zayani ...	,, ...	Basra ...	.....	907	...	6
27th August 1921 ...	,, Akbar ...	,, ...	Jeddah *viâ* Kamaran.	Karachi and Bombay.	1,014	...	8
29th August 1921 ...	,, Nairang ...	,, ...	.....	Karachi ...	769	...	4
1st September 1921...	,, Homayun ...	,, ...	Jeddah ...	Persian Gulf...	891	...	3
4th September 1921 ..	,, Nurani ...	,, ...	.....	Bombay *viâ* Karachi.	578	...	2
7th October 1921 ...	,, Koweit ...	,, ...	Jeddah *viâ* Kamaran.	Bombay ...	1,035	...	2
2nd November 1921 .	,, Dara ..	,, ...	Jeddah ...	Bushire, Muhamra and Basrah.	1,422	...	1
3rd November 1921 .	,, Akbar ...	,, ...	Jeddah *viâ* Kamaran.	Basrah and Bushire.	1,092	...	3
25th November 1921 .	,, Nairang ...	,, ...	Jeddah ...	Bombay *viâ* Mucalla,	784	...	2

Statement showing the number of Chickenpox treated in the Infectious Diseases Hospital, Maalla, during the year 1921 :—

Year.	Remaining as per last return.	Admissions.	Deaths.	Remarks.
1921	Nil.	3	Nil.	Chickenpox 3.

Source of admission.								European.	Indians.	Arabs.	Somalis.	N. Christians.	Others.	Total.
Shipping.	Tawahi.	Crater.	Maalla.	Shaikh Othman.	Interior.	Khor Maksar.	Total.							
Nil.	Nil.	1	1	Nil.	1	Nil	3	...	...	3	...	...	...	3

Statement showing the number of Smallpox cases treated at the Infectious Diseases Hospital, Maalla, during the year 1921 :—

Year.	Remaining as per last return.	Admissions.	Deaths.	Remarks.
1921	2	22	2	Smallpox 24.

Source of admission.								Europeans.	Indians.	Arabs.	Somalis.	N. Christians.	Others.	Total.
Shipping.	Tawahi.	Crater.	Maalla.	Shaikh Othman.	Interior.	Khor Maksar.	Total.							
14 + 4 from Dhows.	...	4	...	...	2	...	24	8	3	8	1	2	2	24

ESTABLISHMENT.

Lieut-Colonel J. L. Marjoribanks, I.M.S., held the appointment of Port Health Officer, Aden, from 1st January to 31st December 1921.

OFFICE ESTABLISHMENT.

Mr. Othman Abdul Kader, Clerk, from 1st January to 31st December 1921.

Peon Abdo Ahmed from 1st January to 31st December 1921.

LAUNCH ESTABLISHMENT.

1. Driver Hussain Noman from 1st January to 30th April 1921. He was granted 4 months' privilege leave from 1st May 1921. Stoker Abdo Noman was appointed to act for him during his absence on leave. Ahmed Noman (an outsider) was appointed to act for the Stoker during the period the permanent incumbent was acting in the capacity of the Driver.

2. Succani Mohamed Magon from 1st January to 31st December 1921.

3. Stoker Abdo Noman from 1st January to 30th April 1921. He acted as Driver from 1st May to 31st August 1921. He was granted privilege leave for 1 month and 21 days combined with extraordinary leave for 2 months and 9 days from 1st September 1921. Ahmed Noman was appointed to act for him during his absence on leave.

4. Lascar Ali Magon from 1st January to 31st December 1921.

DISINFECTING STOVE.

The services of the fireman were maintained for the care of the Disinfecting Stove during the year and his services were made permanent in accordance with Government Order, General Department, No. 4607 of 19th April 1920.

J. L. MARJORIBANKS,
Lieut.-Colonel, I.M.S.,
Health Officer, Port of Aden.

APPENDIX III.

The following table shows when drainage systems and water-works were completed in the towns mentioned therein, with the average annual death-rate for the five-year period preceding the introduction and also the ratio for the five-year period ending with the year under report, exclusive of recorded plague mortality:—

The rural death-rates for each district are added for comparison.

District.	Táluka.	Town.	Date of completion of works of		Average annual death-rate for the five-year period ending with 1921 exclusive of plague.	Average annual death-rate for the five-year period preceding the introduction of drainage or water-supply or both.	Death-rate in rural circles for the year 1921.	Plague mortality in rural circles for the year 1921.
			Drainage.	Water-supply.				
1	2	3	4	5	6	7	8	9
.....	.....	Bombay	*a*1879	*b*1892	50·50	27·98	.....	.....
West Khándesh	Dhulia	Dhulia	.....	1896	30·54	32·50	28·34	.....
Ahmednagar	Ahmednagar	Ahmednagar	.....	1897	36·88	55·65	34·43	.....
Surat	Chorási	Surat	.....	1898	34·71	39·77	22·02	·04
Ahmedabad	Daskroi	Ahmedabad	*c*1893	1891	50·86	45·21	28·56	.....
Karáchi	Karáchi	Karáchi	*c*1895	1894	46·09	35·15	13·53	.....
Sukkur	Sukkur	Sukkur	.....	1895	37·38	28·70	18·70	.....
Bombay Suburban	South Salsette ...	Bándra	.....	1896	30·07	23·01	21·85	·62
Kolába	Panvel	Panvel	.....	1895	23·61	19·50	29·96	.....
Dhárwár	Hubli	Hubli	.....	1894	32·74	25·70	25·33	1·96
Ahmedabad	Viramgám	Viramgám	*d*1893.	.....	47·49	69·28	27·76	.....
East Khándesh	Jalgaon	Jalgaon	.....	1909	34·02	31·56	39·04	·98
Sholápur	Pandharpur	Pandharpur	.....	1911	53·55	49·98	26·52	.....
Násik	Násik	Násik	.....	1913	45·31	52·73	32·91	·17
Bijápu	Bijápur	Bijápur	.....	1913	33·49	30·08	21·63	.....
Poona	Poona City táluka ...	Poona	1916	.....	54·59	36·47	14·60	.....

a Drainage works commenced in 1879 are still in progress.

b Thána water-works completed in 1892. Besides there are Vehár and Tulshi water-works.

c Drainage system partially introduced.

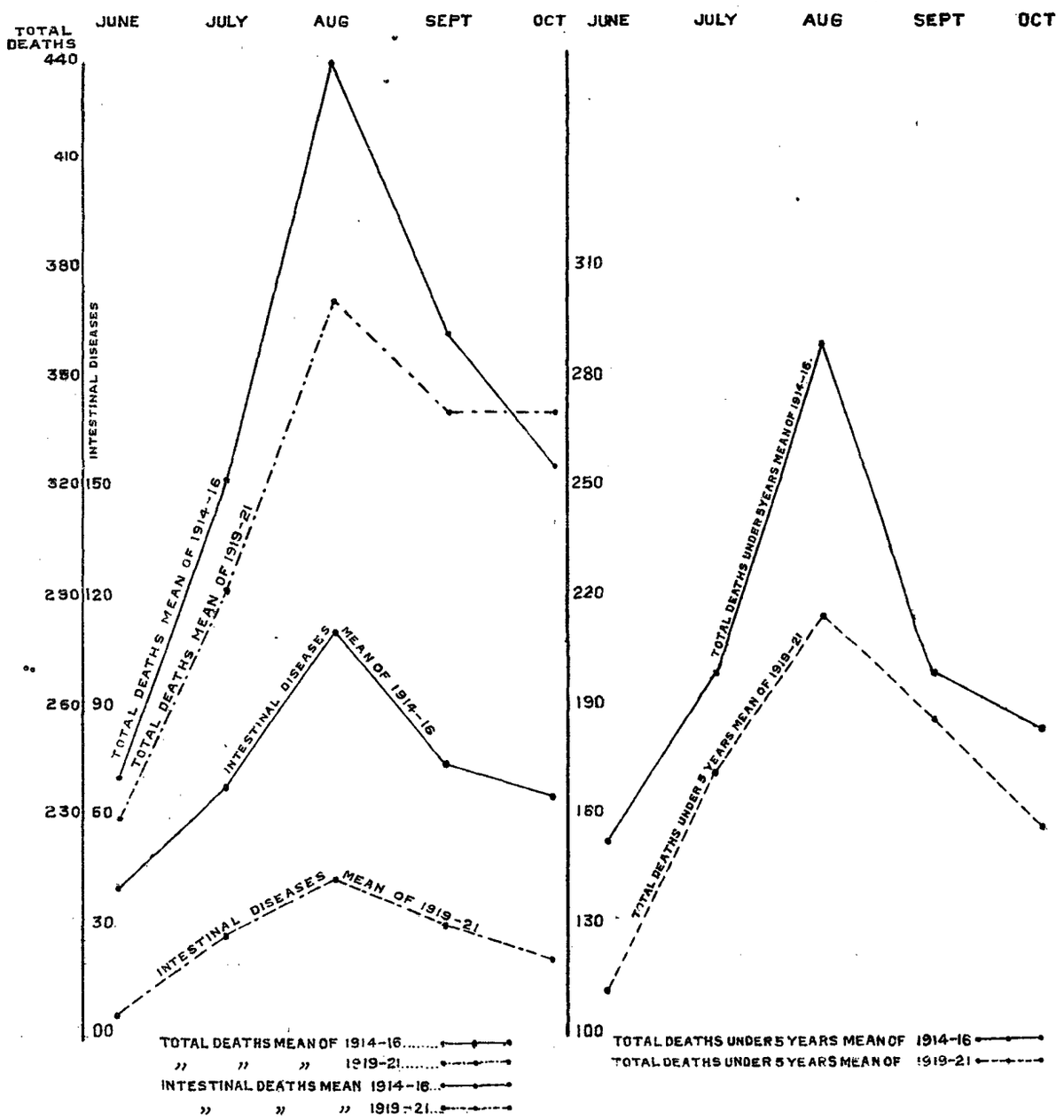
d In 1893 the gradient of the channel round the town was improved to carry away the sullage water that used to accumulate and stagnate round the town.

APPENDIX III (a)

COMPARISON OF TOTAL DEATHS, DEATHS FROM INTESTINAL DISEASES AND DEATHS OF CHILDREN FOR PERIODS BEFORE AND AFTER INSTALLATION OF PIPED WATER-SUPPLY. IN SHOLAPUR TOWN.

MEAN OF TOTAL DEATHS (EXCLUDING EPIDEMIC DISEASES) AND OF INTESTINAL DISEASES 3-YEAR PERIODS 1914-16 & 1919-21 DURING MONSOON MONTHS.

MEAN OF DEATHS UNDER 5 YEARS FOR THE 3 YEAR PERIODS 1914-16 & DURING THE MONSOON MONTHS



YEAR 1917 OMITTED, AS PIPE LINE WAS LAID IN THAT YEAR.
YEAR 1918 OMITTED, ON ACCOUNT OF INFLUENZA DURING THIS PERIOD

APPENDIX IV.

ANNUAL FORM No. I.—*Showing the Births registered in the Districts of the Bombay Presidency during the year 1921.*

1	2	3			4			5			6	7	8	9		
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1921.			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of Births over Deaths per 1,000 of Population.	Excess of Deaths over Births per 1,000 of Population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.				Male.	Female.	Total.
	Western Registration District.															
1	East Khándesh ..	545,376	529,746	1,075,123	23,172	21,999	45,171	21·55	20·46	42·01	105·33	8·02	..	25·15	23·69	48·84
2	West Khándesh ..	309,511	303,201	612,712	12,950	12,291	25,241	21·14	20·06	41·20	105·36	16·30	..	25·41	24·49	49·90
3	Násik	418,510	404,706	825,216	15,827	14,645	30,472	19·18	17·75	36·93	108·07	6 16	..	22·81	21·64	44·48
4	Thána	388,310	368,589	756,899	11,716	10,903	22,619	15·48	14·40	29·88	107·46	4·59	..	17·23	16·43	33·66
5	Bombay Suburban ..	87,567	63,874	151,441	1,260	1,180	2,440	8·32	7·79	16·11	106·78	..	5·62			
6	Kolába	279,350	283,122	562,472	10,897	10,067	20,964	19·37	17·90	37·27	108·24	9·18	..	19·84	18·85	38·69
7	City of Bombay ..	751,948	396,867	1,148,815	9,818	9,015	18,833	8·54	7·85	16·39	109·91	..	21·12	10·80	10·32	21·12
	Central Registration District.															
8	Ahmednagar	362,947	361,031	723,978	13,476	12,198	25,674	18·61	16·85	35·46	110·48	0·24	..	20·74	19·36	40·10
9	Poona	500,601	487,080	987,681	16,262	15,015	31,277	16·47	15·20	31·67	108·31	2·65	..	17·20	16·02	33·22
10	Sholápur	382,374	359,256	741,630	13,558	12,701	26,259	18·28	17·13	35·41	106·75	3·18	..	21·11	20·03	41·14
11	Sátára	511,238	514,457	1,025,695	18,995	17,782	36,777	18·52	17·34	35·86	106·82	13·25	..	19·97	18·91	38·88
12	Ratnágiri	525,085	628,895	1,153,980	20,660	19,352	40,012	17·90	16·77	34·67	106·76	11·33	..	16·68	16·00	32·68
	Southern Registration District.															
13	Belgaum	484,615	465,047	949,662	18,530	17,485	36,015	19·51	18·41	37·92	105·97	16·62	..	20·78	20·03	40·81
14	Dhárwár	528,348	507,861	1,036,209	19,174	18,168	37,342	18·51	17·53	36·04	105·54	14·71	..	19·96	19·25	39·21
15	Bijápur	405,148	391,208	796,356	15,249	14,440	29,689	19·15	18·13	37·28	105·60	14·37	..	19·63	18·95	38·5
16	Kánara	203,950	197,526	401,476	6,737	6,282	13,019	16·78	15·65	32·43	107·24	3·82	..	17·17	16·26	33·53
	Gujarát Registration District.															
17	Surat	337,276	336,845	674,121	12,863	12,201	25,064	19·08	18·10	37·18	105·43	13·82	..	19·67	18·73	38·40
18	Broach	158,568	149,143	307,711	6,807	6,325	13,132	22·12	20·56	42·68	107·62	15·97	..	23·31	21·89	45·20
19	Kaira	379,702	331,203	710,905	12,865	11,296	24,161	18·10	15·89	33·99	113·89	7·56	..	22·23	20·11	42·34
20	Panch Mahals ..	193,385	181,446	374,831	7,097	6,732	13,829	18·93	17·96	36·89	105·42	16·91	..	22·58	21·48	44·06
21	Ahmedabad	473,693	414,231	887,924	16,602	15,387	31,989	18·70	17·33	36·03	107·90	4·41	..	21·20	19·19	40·39
	Sind Registration District.															
22	Karáchi	302,563	228,094	530,657	6,612	5,945	12,557	12·46	11·20	23·66	111·22	2·03	..	12·48	10·73	23·21
23	Hyderabad	316,834	250,415	567,249	6,401	5,212	11,613	11·28	9·19	20·47	122·81	5·14	..	9·61	7·11	16·72
24	Thar and Párkar ..	221,074	175,233	396,307	4,052	3,204	7,256	10·22	8·08	18·30	126·47	5·22	..	11·40	9·01	20·41
25	Nawabshah	233,826	184,826	418,652	5,369	3,904	9,273	12·82	9·33	22·15	137·53	9·79	..	11·18	8·03	19·21
26	Lárkána	331,204	266,733	597,937	8,116	6,569	14,685	13·57	10·99	24·56	123·55	9·00	..	12·99	10·35	23·34
27	Sukkur	281,493	227,869	509,362	7,633	6,234	13,867	14·99	12·24	27·23	122·44	10·52	..	13·38	10·74	24·12
28	Upper Sind Frontier.	134,321	106,293	240,614	3,053	2,357	5,410	12·69	9·79	22·48	129·53	10·13	..	12·83	10·01	22·84
	Total for the Presidency ..	10,048,817	9,116,797	19,165,614	325,751	298,889	624,640	17·00	15·59	32·59	108·99	6·59	.	18·43	17·10	35·53

ANNUAL FORM NO. II.—*Showing the* BIRTHS *and* DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1921.*

Serial Number.	Districts.	Area in square miles.	Average population per square mile.	Population (Census 1921). Male.	Female.	Total.	Births. Total Number.	Birth-rate per 1,000 of population.	Number of Deaths registered. Male.	Female.	Total.	Number of Deaths of males to every 100 Deaths of females.
	Western Registration District.											
1	East Khándesh	4,551	236	545,376	529,746	1,075,122	45,171	42·01	18,973	17,575	36,548	107·95
2	West Khándesh	5,439	113	309,511	303,201	612,712	25,241	41·20	7,961	7,295	15,256	109 13
3	Násik	5,877	140	418,510	406,706	825,216	30,472	36·93	13,427	11,969	25,396	112 28
4	Thána	3,434	220	388,310	368,589	756,899	22,619	29·88	10,160	8,979	19,139	113·15
5	Bombay Suburban... ...	142	1,066	87,587	63,874	151,441	2,440	16·11	1,882	1,410	3,292	133 47
6	Kolába	2,169	259	279,350	283,122	562,472	20,964	37·27	8,142	7,657	15,799	106·33
7	City of Bombay	24	47,867	751,948	396,867	1,148,815	18,833	16·39	30,118	23,013	53,131	130·87
	Central Registration District.											
8	Ahmednagar...	6,610	109	362,947	361,031	723,978	25,674	35·46	13,321	12,180	25,501	109·37
9	Poona	5,357	184	500,601	487,080	987,681	31,277	31·67	15,309	13,346	28,655	114·71
10	Sholápur	4,556	163	382,374	359,256	741,630	26,259	35·41	12,671	11,229	23,900	112·84
11	Sátára	4,910	209	511,238	514,457	1,025,695	36,777	35·86	12,159	11,029	23,188	110·25
12	Ratnágiri	3,989	289	525,085	628,895	1,153,980	40,012	34·67	13,582	13,352	26,934	101·72
	Southern Registration District.											
13	Belgaum	4,611	206	484,615	465,047	949,662	36,015	37·92	10,315	9,911	20,226	104·08
14	Dhárwár	4,606	225	528,348	507,861	1,036,209	37,342	36·04	11,301	10,795	22,096	104 69
15	Bijápur	5,707	139	405,148	391,208	796,356	29,689	37·28	9,504	8,742	18,246	108·72
16	Kánara	3,946	102	203,950	197,526	401,476	13,019	32·43	5,833	5,653	11,486	103·18
	Gujarát Registration District.											
17	Surat	1,651	408	337,276	336,845	674,121	25,064	37·18	8,184	7,566	15,750	108·17
18	Broach	1,468	210	158,568	149,143	307,711	13,132	42·68	4,150	4,067	8,217	102·04
19	Kaira	1,596	445	379,702	331,203	710,905	24,161	33·99	9,944	8,842	18,786	112·46
20	Panch Mahals	1,606	233	193,385	181,446	374,831	13,829	36·89	3,849	3,640	7,489	105·74
21	Ahmedabad	3,824	232	473,693	414,231	887,924	31,989	36·03	14,585	13,484	28,069	108·17
	Sind Registration District.											
22	Karáchi	11,231	47	302,563	228,094	530,657	12,557	23·66	6,372	5,107	11,479	124·77
23	Hyderabad	4,417	128	316,834	250,415	567,249	11,613	20·47	4,961	3,739	8,700	132·68
24	Thar and Párkar	13,636	29	221,074	175,233	396,307	7,256	18·30	2,938	2,251	5,189	130·53
25	Nawabshah	3,889	107	233,826	184,826	418,652	9,273	22·15	2,844	2,329	5,173	122·11
26	Lárkána	5,057	118	331,204	266,733	597,937	14,685	24·56	5,141	4,162	9,303	123·52
27	Sukkur	5,612	91	281,493	227,869	509,362	13,867	27·23	4,629	3,882	8,511	119·24
28	Upper Sind Frontier ...	2,664	90	134,321	106,293	240,614	5,410	22·48	1,610	1,291	2,901	124·71
	Total for the Presidency ...	122,578	156	10,048,817	9,116,797	19,165,614	624,640	32·59	263,865	234,485	498,350	112·53

Serial Number.	Districts.	Deaths per 1,000 of Population from: Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	All causes. Male.	Female.	Total.	Mean Ratio of deaths per 1,000 during previous five years. Male.	Female.	Total.
	Western Registration District.														
1	East Khándesh	1·12	·02	·81	16·35	1·41	4·33	·24	9·22	34·79	33·18	34·00	43·02	42·86	42·93
2	West Khándesh	·62	·01	·10	11·35	·48	3·04	·33	8·47	25·72	24·06	24·90	43·19	43·38	43·35
3	Násik	·19	·03	·29	14·54	1·14	5·19	·37	9·01	32·08	29·40	30·76	45·33	45·48	45·41
4	Thána	·02	·07	·23	18·73	·40	1·55	·53	3·76	26·16	24·33	25·29	30·60	31·32	30·94
5	Bombay Suburban... ...	·32	·12	·61	12·39	1·04	2·38	·64	4·23	21·48	22·07	21·73			
6	Kolába	·12	·10	·11	18·57	·75	2·08	·41	5·95	29·15	27·04	28·10	33·82	32·76	33·29
7	City of Bombay	·06	·34	·70	5·94	4·25	20·33	·91	13·72	40·05	58·01	46·25	31·99	44·77	35·19
	Central Registration District.														
8	Ahmednagar	·17	·01	·01	14·98	4·35	6·61	·32	8·77	3 6·70	33·74	35·22	39·12	38·62	38·81
9	Poona	·11	·07	·01	12·35	2·05	6·58	·36	7·48	3 0·58	27·40	29·01	38·30	38·05	38·18
10	Sholápur	·72	...	....	16·13	2·77	2·42	·40	9·79	33·19	31·25	32·23	46·99	48·72	47·84
11	Sátára	·05	·02	·78	12·57	1·69	1·68	·41	5·41	3·78	21·44	22·61	39·69	40·12	39·98
12	Ratnágiri	·02	·11	...	11·61	1·03	4·45	·49	5·63	25·87	21·23	23·24	26·91	23·76	25·10
	Southern Registration District.														
13	Belgaum	·05	·05	·21	6·00	2·22	2·92	·45	9·40	21·28	21·31	21·30	38·66	39·58	39·00
14	Dhárwár	·05	·07	1·21	6·19	·83	2·66	·38	9·89	21·39	21·26	21·33	38·70	40·09	39·79
15	Bijápur	·02	·04	·01	9·41	2·04	2·79	·40	8·20	23·46	22 35	22·91	39·75	40·62	40·28
16	Kánara	...	·49	·05	12·36	2·03	1·61	·53	11·54	28·60	28·62	28·61	32·91	32·89	32·90
	Gujarát Registration District.														
17	Surat	·01	·11	·01	6·93	·70	8·64	·36	6·60	24·26	22·46	23·36	34·39	33·79	34·05
18	Broach	...	·02	...	10·94	·57	8·10	·46	6·67	26·17	27·27	26·76	39·06	41·14	40·08
19	Kaira	·05	·14	..	8·41	·77	9·44	·58	7·03	26·19	26·70	26·42	36·19	38·13	36·88
20	Panch Mahals	·38	·11	...	10·40	·54	3·18	·37	5·00	19·90	20·06	19·98	25·23	25·90	25·55
21	Ahmedabad	·01	·16	...	15·18	·82	8·43	·47	6·54	30·78	32·55	31·61	40·21	42·28	41·13
	Sind Registration District.														
22	Karáchi	·74	·08	·10	9·58	·63	3·23	·29	6·98	21·06	22·39	21·63	25.53	26·99	26·25
23	Hyderabad	·02	·01	...	10·93	·16	2·59	·22	1·41	15·66	14·93	15·34	23·40	23·70	23·56
24	Thar and Párkar	·03	·50	...	11·00	·04	·81	·19	·52	13·29	12·85	13·09	25·32	26·43	25·82
25	Nawabshah	...	·06	...	10·76	·02	·82	·24	·45	12·33	12·60	12·35	24·44	25·39	24·87
26	Lárkána	...	...	...	14·01	·04	·42	·28	·86	15·52	15·60	15·56	25·16	26·69	26·09
27	Sukkur	·01	·01	...	13·66	·14	·49	·20	2·20	16·44	17·04	16·71	27·39	30·18	28·66
28	Upper Sind Frontier ...	...	·01	...	11·15	·03	·33	·25	·29	11·99	12·15	12·06	22·89	25·62	23 94
	Total for the Presidency...	·18	·09	·24	11·80	1·40	4·87	·41	7·01	26·26	25·72	26·00	35·35	36·36	35·63

ANNUAL FORM No. III.—DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1921.*

1	2	3												4	5
No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total Deaths registered during the year.	No.
	Western Registration District.														
1	East Khándesh	3,202	2,972	3,267	3,140	2,811	1,672	2,562	4,754	3,557	3,061	2,874	2,676	36,543	1
2	West Khándesh	1,406	1,250	1,404	1,221	903	674	962	1,683	1,591	1,333	1,483	1,347	15,256	2
3	Násik	2,412	2,277	2,440	2,227	1,635	1,288	1,751	2,402	2,260	2,233	2,301	2,160	25,386	3
4	Thána	2,175	2,461	2,622	1,924	1,383	1,042	915	1,356	1,170	1,201	1,381	1,509	19,139	4
5	Bombay Suburban ..	336	314	333	319	254	193	220	263	276	255	262	267	3,292	5
6	Kolaba	1,639	1,735	1,741	1,401	1,071	892	962	1,218	1,228	1,071	1,388	1,453	15,799	6
7	City of Bombay	5,159	5,215	6,399	6,255	4,780	3,802	3,491	3,928	3,896	3,802	3,501	3,413	53,131	7
	Central Registration District.														
8	Ahmednagar	1,936	1,708	1,856	1,835	1,580	1,225	1,870	2,761	2,758	2,552	2,667	2,703	25,501	8
9	Poona	2,728	2,377	2,741	2,604	2,066	1,615	1,981	2,477	2,649	2,309	2,360	2,658	28,655	9
10	Sholápur	2,091	1,726	2,243	2,116	1,964	1,241	1,834	2,796	2,480	1,890	1,713	1,806	23,900	10
11	Sátára	1,810	1,666	2,371	2,162	1,890	1,357	1,624	2,148	2,142	2,056	1,898	2,064	23,188	11
12	Ratnágiri	2,525	2,595	2,628	2,652	2,168	1,906	2,029	2,200	2,004	1,827	2,005	2,400	26,934	12
	Southern Registration District.														
13	Belgaum	1,433	1,461	2,368	1,989	1,646	1,288	1,484	1,653	1,723	1,772	1,667	1,742	20,226	13
14	Dhárwar	2,181	1,833	2,438	2,160	1,659	1,362	1,416	1,684	1,757	1,816	1,800	1,987	22,096	14
15	Bijápur	1,440	1,291	1,834	1,914	1,506	1,157	1,417	1,626	1,583	1,571	1,456	1,451	18,246	15
16	Kánara	1,158	977	1,177	1,218	758	791	798	932	827	895	885	1,070	11,486	16
	Gujarát Registration District.														
17	Surat	1,625	1,740	1,871	1,460	1,208	883	1,000	1,150	1,167	1,047	1,256	1,343	15,750	17
18	Broach	828	777	793	646	555	458	489	665	647	763	876	720	8,217	18
19	Kaira	1,921	1,753	2,136	1,760	1,447	1,133	983	1,238	1,510	1,789	1,703	1,413	18,786	19
20	Panch Mahals	707	844	839	583	448	529	428	640	729	664	598	480	7,489	20
21	Ahmedabad...	3,280	2,515	2,559	2,357	2,028	1,465	1,218	1,679	2,281	2,657	3,232	2,798	28,069	21
	Sind Registration District.														
22	Karáchi	1,381	1,455	875	739	657	743	653	1,063	1,104	1,082	893	834	11,479	22
23	Hyderabad	1,276	1,172	1,074	755	616	493	411	498	573	580	598	654	8,700	23
24	Thar and Párkar	665	737	657	450	432	319	246	187	263	392	438	463	5,189	24
25	Nawabshah	672	765	712	453	346	328	250	190	268	387	448	354	5,173	25
26	Lárkána	1,281	1,381	963	810	570	442	411	458	557	573	1,065	792	9,303	26
27	Sukkur	1,177	968	889	671	592	529	479	513	565	678	809	641	8,511	27
28	Upper Sind Frontier ...	393	423	239	232	192	176	135	137	204	259	293	218	2,901	28
	Total for the Presidency...	48,837	46,391	51,469	46,103	37,160	28,503	32,009	42,298	41,769	40,545	41,850	41,416	498,350	
	Ratio of deaths per 1,000 in each month... ...	2·55	2·42	2·68	2·40	1·94	1·49	1·67	2·21	2·18	2·12	2·18	2·16	26·00	

ANNUAL FORM NO. IV.—DEATHS *registered according to* AGE IN

1	2	3		4		5		6	
No.	Districts.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.								
1	East Khándesh	4,985	4,286	5,162	4,920	1,051	1,049	538	568
2	West Khándesh	2,232	1,848	1,593	1,675	413	446	252	224
3	Násik	3,079	2,605	2,206	2,211	686	629	402	341
4	Thána	1,619	1,402	1,234	1,239	647	661	363	348
5	Bombay Suburban	252	224	241	200	105	93	72	60
6	Kolába	1,621	1,312	1,032	1,138	444	456	235	239
7	City of Bombay	6,722	5,936	3,471	3,893	1,145	1,226	932	814
	Central Registration District.								
8	Ahmednagar	2,790	2,298	2,407	2,294	604	635	343	310
9	Poona	3,577	2,929	2,719	2,367	647	609	432	390
10	Sholápur	3,509	2,792	2,665	2,507	678	657	332	305
11	Sátára	2,847	2,263	2,115	1,990	563	569	394	389
12	Ratnágiri	1,882	1,613	1,750	1,665	628	720	350	384
	Southern Registration District.								
13	Belgáum	2,437	1,878	1,792	1,920	546	576	326	297
14	Dhárwár	2,723	2,140	1,808	1,762	620	676	363	404
15	Bijápur	2,191	1,737	1,616	1,615	563	563	305	276
16	Kánara	1,316	1,075	621	719	192	239	117	143
	Gujarat Registration District.								
17	Surat	2,061	1,854	1,241	1,152	371	350	192	195
18	Broach	1,244	1,133	849	852	177	185	86	89
19	Kaira	2,211	2,076	1,990	1,791	357	315	249	217
20	Panch Mahals	872	755	606	669	247	204	145	119
21	Ahmedabad	3,797	3,490	2,610	2,556	594	575	379	342
	Sind Registration District.								
22	Karáchi	1,587	1,327	891	894	315	303	200	175
23	Hyderabad	1,050	882	576	493	268	237	159	127
24	Thar and Parkar	461	398	248	260	187	164	125	108
25	Nawabshah	573	478	243	233	176	171	119	79
26	Lárkána	979	856	535	422	359	296	241	150
27	Sukkur	1,284	1,141	582	490	226	157	150	103
28	Upper Sind Frontier	330	295	183	175	83	70	66	35
	Total for the Presidency	60,231	51,023	42,986	42,102	12,892	12,831	7,867	7,231
	Population according to Census of 1921	287,146	2,82,999	885,160	924,937	1,468,775	1,379,851	1,224,010	969,652
	Ratios per 1,000 living ...	209·76	180·29	48·56	45·52	8·78	9·30	6·43	7·46

NOTE.—Civil population by age groups not being available, rates in Form IV are calculated on the total population Indian Civil

THE DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1921.*

7		8		9		10		11		12		13
15 and under 20.		20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
340	466	928	1,169	1,140	1,035	1,146	812	1,106	751	2,577	2,519	1
172	202	425	532	615	604	610	409	569	357	1,080	998	2
322	450	1,090	1,205	1,450	1,155	1,321	815	1,125	803	1,746	1,745	3
333	306	933	1,104	1,312	1,131	1,321	810	1,123	698	1,275	1,280	4
65	67	230	191	253	171	233	128	154	93	277	183	5
232	292	697	799	892	863	922	620	912	619	1,215	1,319	6
1,678	1,231	5,102	3,044	3,978	2,035	2,600	1,210	2,071	1,213	2,419	2,411	7
323	489	1,097	1,143	1,087	1,037	1,274	921	1,501	1,207	1,895	1,846	8
349	421	1,127	1,277	1,406	1,157	1,256	903	1,199	797	2,597	2,496	9
237	290	703	720	741	736	747	577	857	622	2,202	2,023	10
313	352	907	883	969	878	844	620	950	720	2,257	2,365	11
367	393	1,305	1,402	1,312	1,290	1,191	921	1,406	1,103	3,391	3,861	12
186	268	622	880	750	788	784	597	863	606	2,009	2,151	13
262	321	821	1,143	922	1,015	916	707	993	791	1,873	1,836	14
168	206	545	768	627	731	656	471	878	634	1,955	1,741	15
143	193	515	709	722	616	682	441	552	446	973	1,072	16
192	218	634	820	679	665	672	503	774	463	1,368	1,346	17
71	72	197	288	239	302	305	251	376	286	606	609	18
179	174	718	687	884	787	898	673	913	623	1,545	1,499	19
110	99	250	337	376	357	331	272	372	238	540	590	20
400	413	1,382	1,252	1,367	1,256	1,349	957	1,279	1,000	1,428	1,663	21
255	232	706	672	684	468	620	312	457	225	657	499	22
213	202	644	583	631	418	556	277	399	188	465	332	23
158	148	428	353	426	303	333	202	297	170	305	193	24
128	100	388	459	355	291	342	167	227	139	263	164	25
245	257	669	762	640	504	543	315	446	249	484	351	26
176	240	443	531	429	376	430	265	411	195	498	384	27
87	67	158	193	195	147	162	115	136	75	210	119	28
7,704	8,169	23,604	23,836	25,081	21,116	23,044	15,271	22,346	15,311	38,110	37,595	
751,226	650,813	1,781,925	1,656,476	1,642,370	1,349,143	1,025,082	901,989	615,661	556,308	457,220	480,976	
10·26	12·55	13·25	14·39	15·27	15·65	22·48	16·93	36·30	27·52	83·35	78·16	

figures which include Europeans Anglo-Indians and Military and Jail population. The rates in other forms are based on the population.

ANNUAL FORM No. IV (*a*).—*Showing the details of* DEATHS *under one year*

1	2	Not exceeding		
		Male.		
No.	Districts.	Under one week.	Over one week.	Total.
		1	2	3
	Western Registration District.			
1	East Khándesh	989	729	1,718
2	West Khándesh	478	319	797
3	Násik	754	523	1,277
4	Thána	611	201	812
5	Bombay Suburban	70	27	97
6	Kolába	622	261	883
7	City of Bombay	1,324	907	2,231
	Central Registration District.			
8	Ahmednagar	694	392	1,086
9	Poona	705	515	1,220
10	Sholápur	885	526	1,411
11	Sátára	690	378	1,068
12	Ratnágiri	534	421	955
	Southern Registration District.			
13	Belgaum	641	505	1,146
14	Dhárwár	687	545	1,232
15	Bijápur	477	413	890
16	Kánara	518	261	779
	Gujarát Registration District.			
17	Surat	558	355	913
18	Broach	286	215	501
19	Kaira	355	365	720
20	Panch Mahals	182	163	345
21	Ahmedabad	577	628	1,205
	Sind Registration District.			
22	Karáchi	364	210	574
23	Hyderabad	269	191	460
24	Thar and Párkar	143	89	232
25	Nawabshah	170	126	296
26	Lárkána	260	194	454
27	Sukkur	291	256	547
28	Upper Sind Frontier	112	61	173
	Total for the Presidency ...	14,246	9,776	24,022

IN THE DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1921.*

DEATHS UNDER ONE YEAR													
one month.				Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
Female.			Total of columns 3 and 6.										
Under one week.	Over one week.	Total.		Male.	Female.	Total.	Male.	Female.	Total.				
4	5	6	7	8	9	10	11	12	13	14	15	16	17
863	679	1,542	3,260	1,821	1,604	3,425	1,446	1,140	2,586	4,985	4,286	9,271	1
374	302	676	1,473	955	769	1,724	480	403	883	2,232	1,848	4,080	2
648	496	1,144	2,421	1,124	937	2,061	678	524	1,202	3,079	2,605	5,684	3
503	161	664	1,476	604	550	1,154	203	188	391	1,619	1,402	3,021	4
47	26	73	170	94	108	202	61	43	104	252	224	476	5
449	218	667	1,550	503	439	942	235	206	441	1,621	1,312	2,933	6
886	731	1,617	3,848	2,193	1,940	4,133	2,298	2,379	4,677	6,722	5,936	12,658	7
585	339	924	2,010	1,137	932	2,069	567	442	1,009	2,790	2,298	5,088	8
582	502	1,084	2,304	1,188	903	2,091	1,169	942	2,111	3,577	2,929	6,506	9
658	425	1,083	2,494	1,136	950	2,086	962	759	1,721	3,509	2,792	6,301	10
586	355	941	2,009	1,150	905	2,055	629	417	1,046	2,847	2,263	5,110	11
429	355	784	1,739	493	447	940	434	382	816	1,882	1,613	3,495	12
480	386	866	2,012	819	613	1,432	472	399	871	2,437	1,878	4,315	13
491	446	937	2,169	989	780	1,769	502	423	925	2,723	2,140	4,863	14
364	340	704	1,594	850	673	1,523	451	360	811	2,191	1,737	3,928	15
438	191	629	1,408	356	307	663	181	139	320	1,316	1,075	2,391	16
522	337	859	1,772	649	588	1,237	499	407	906	2,061	1,854	3,915	17
271	215	486	987	378	351	729	365	296	661	1,244	1,133	2,377	18
348	398	746	1,466	822	739	1,561	669	591	1,260	2,211	2,076	4,287	19
172	130	302	647	316	270	586	211	183	394	872	755	1,627	20
490	547	1,037	2,242	1,419	1,314	2,733	1,173	1,139	2,312	3,797	3,490	7,287	21
286	223	509	1,083	492	380	872	521	438	959	1,587	1,327	2,914	22
203	151	354	814	249	252	501	341	276	617	1,050	882	1,932	23
127	65	192	424	134	96	230	95	110	205	461	398	859	24
133	132	264	560	182	139	321	95	75	170	573	478	1,051	25
224	179	403	857	333	288	621	192	165	357	979	856	1,835	26
274	202	476	1,023	392	346	738	345	319	664	1,284	1,141	2,425	27
69	65	134	307	88	85	173	69	76	145	330	295	625	28
11,501	8,596	20,097	44,119	20,866	17,705	38,571	15,343	13,221	28,564	60,231	51,023	111,254	

ANNUAL FORM No. V.—DEATHS *registered according to* CLASSES *and by*

1	2	3							
		POPULATION ACCORDING TO CENSUS							
No.	Districts.	Mahomedans.		Hindus.		Jains.		Christians.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.								
1	East Khandesh	55,176	52,333	484,070	472,143	4,708	3,992	625	518
2	West Khandesh	16,011	15,346	262,850	256,881	2,255	1,832	543	445
3	Nasik	23,806	21,948	388,491	379,357	4,076	3,445	1,577	1,524
4	Thana	17,411	14,481	354,764	338,299	1,524	744	13,339	13,112
5	Bombay Suburban	8,728	5,625	65,684	46,744	1,354	632	10,534	9,609
6	Kolaba	14,012	14,342	262,562	266,748	1,153	487	622	482
7	City of Bombay	126,177	57,210	543,171	289,272	17,587	6,297	32,198	16,096
	Central Registration District.								
8	Ahmednagar	18,966	17,870	327,801	325,681	6,867	6,171	10,967	11,185
9	Poona	23,591	19,913	465,217	454,887	6,706	4,984	5,109	5,448
10	Sholapur	30,467	28,235	346,655	326,392	4,015	3,413	1,067	1,055
11	Satara	18,337	17,652	483,403	488,459	8,104	7,197	1,102	886
12	Ratnagiri	34,410	46,581	486,985	578,134	819	821	3,078	3,339
	Southern Registration District.								
13	Belgaum	40,875	38,943	418,962	403,209	21,868	19,987	3,009	2,868
14	Dharwar	73,484	69,553	446,006	430,468	5,741	4,809	3,321	2,888
15	Bijapur	48,940	47,185	354,458	342,191	1,675	1,320	537	526
16	Kanara	12,580	13,822	182,587	175,191	595	519	8,051	7,994
	Gujarat Registration District.								
17	Surat	28,071	28,179	279,833	280,147	5,427	4,817	948	680
18	Broach	36,085	33,903	117,003	110,217	1,758	1,497	1,406	1,178
19	Kaira	34,193	31,022	328,634	284,525	3,210	3,128	13,276	12,236
20	Panch Mahals	13,888	12,797	171,905	161,201	956	857	1,626	1,555
21	Ahmedabad	53,637	45,433	399,443	348,852	18,353	17,094	2,598	1,956
	Sind Registration District.								
22	Karachi	213,208	168,986	82,381	53,744	635	483	3,611	2,348
23	Hyderabad	231,341	178,455	87,318	71,811	45	37	127	87
24	Thar and Parkar	118,596	94,139	98,214	77,812	150	118	43	16
25	Nawabshah	181,280	139,855	52,448	44,900	1	.....	19	13
26	Larkana	277,501	222,052	53,024	44,130	.....	.....	27	9
27	Sukkur	200,273	158,123	79,859	68,329	8	8	161	117
28	Upper Sind Frontier	120,494	95,783	13,561	10,294	29	20	4	6
	Total of the Presidency ...	2,071,538	1,689,766	7,637,589	7,130,018	119,619	94,709	1,19,525	98,176

N. B.—This and all the other Statements refer to Indians only and not to Europeans. "Hindus" include

Note.—Population by classes in Form V includes Jail figures.

OF 1921.

Parsis.		Other Classes.		Total.		Total.	Mahomedans.		Hindus.	
Male.	Female.	Male.	Female.	Male.	Female.		Male.	Female.	Male.	Female.
261	178	536	582	545,376	529,746	1,075,122	1,744	1,687	17,221	15,876
120	70	28,244	28,649	310,023	303,223	613,246	332	345	7,620	6,943
509	400	51	32	418,510	406,706	825,216	693	569	12,700	11,353
1,532	1,907	159	150	388,729	368,693	757,422	419	398	9,403	8,286
1,246	1,199	84	66	87,630	63,875	151,505	192	137	1,410	1,047
177	139	837	925	279,363	283,123	562,486	343	292	7,750	7,333
27,948	24,286	5,505	3,718	752,586	396,879	1,149,465	5,971	4,261	21,316	16,494
90	90	62	34	364,753	361,031	725,784	626	605	12,587	11,479
1,557	1,510	454	448	502,634	487,190	989,824	723	618	14,474	12,606
170	161	...	...	382,374	359,256	741,630	988	847	11,633	10,341
261	237	31	26	511,238	514,457	1,025,695	382	339	11,645	10,585
22	14	16	11	525,330	628,900	1,154,230	1,028	885	12,471	12,410
59	62	22	7	484,795	465,076	949,871	804	759	9,075	8,714
129	121	45	24	528,726	507,863	1,036,589	1,488	1,397	9,645	9,247
19	11	...	...	405,629	391,233	796,862	1,161	996	8,303	7,707
9	4	1	...	204,123	197,530	401,653	324	339	5,323	5,117
5,037	6,014	17,960	17,008	337,276	336,845	674,121	605	595	6,389	5,862
1,045	1,176	1,271	1,172	158,568	149,143	307,711	848	932	2,771	2,616
54	40	335	252	379,702	331,203	710,905	922	758	8,910	7,966
127	113	4,883	4,923	193,385	181,446	374,831	254	247	2,444	2,171
861	802	174	173	475,066	414,310	889,376	1,622	1,557	12,608	11,563
1,396	1,323	1,899	1,219	303,130	228,103	531,233	4,105	3,225	2,159	1,795
34	23	14	8	318,879	250,421	569,300	3,007	2,177	1,944	1,555
4	4	4,067	3,144	221,074	175,233	396,307	1,676	1,253	1,255	992
3	...	75	58	233,826	184,826	418,652	2,020	1,611	814	717
2	...	650	542	331,204	266,733	597,937	4,158	3,326	981	830
67	56	1,836	1,252	282,204	227,885	510,089	2,759	2,045	1,856	1,828
...	...	233	190	134,321	106,293	240,614	1,361	1,064	248	224
42,739	39,940	69,444	64,613	10,060,454	9,117,222	19,177,676	40,555	33,264	214,955	193,657

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NUMBER OF DEATHS REGISTERED.

Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1	3	5	7	2	1	...	1	18,973	17,575	36,548
5	4	4	3	...	...	...	...	7,961	7,295	15,256
4	8	24	27	3	2	3	...	13,427	11,959	25,386
3	1	286	262	34	24	15	8	10,160	8,979	19,139
8	2	257	215	13	6	2	3	1,882	1,410	3,292
3	1	24	9	1	...	21	22	8,142	7,657	15,799
976	402	1,102	914	862	756	191	186	30,118	23,013	53,131
17	13	90	83	1	...	...	...	13,321	12,180	25,501
11	14	64	77	19	21	18	10	15,309	13,346	28,655
46	39	3	2	1	...	...	...	12,671	11,229	23,900
117	100	4	2	2	...	9	3	12,159	11,029	23,188
10	10	73	47	...	...	...	...	13,582	13,352	26,934
396	386	40	52	...	...	...	...	10,315	9,911	20,226
119	100	48	49	1	2	...	...	11,301	10,795	22,096
30	27	10	12	...	...	...	...	9,504	8,742	18,246
17	6	168	191	1	...	...	...	5,833	5,653	11,486
88	75	24	19	111	114	967	901	8,184	7,566	15,750
26	21	5	6	31	23	469	469	4,150	4,067	8,217
31	42	63	67	...	...	18	9	9,944	8,842	18,786
10	18	10	6	...	...	1,131	1,198	3,849	3,640	7,489
272	282	35	35	9	13	39	34	14,585	13,484	28,069
...	...	76	60	22	17	10	10	6,372	5,107	11,479
2	...	3	1	1	...	4	6	4,961	3,739	8,700
2	2	...	...	...	...	5	4	2,938	2,251	5,189
...	...	...	...	...	...	10	1	2,844	2,329	5,173
...	...	...	...	...	...	2	6	5,141	4,162	9,303
...	...	2	1	...	2	12	6	4,629	3,882	8,511
...	...	...	...	...	...	1	3	1,610	1,291	2,901
2,194	1,556	2,420	2,147	1,114	981	2,927	2,880	263,865	2,34,485	498,350

SEX, *in the Districts of the* BOMBAY PRESIDENCY *during the year 1921.*

5

RATIO OF DEATHS PER 1,000 OF POPULATION,

Mahomedans.		Hindus.		Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
31·61	32·24	35·58	33·63	·21	·75	8·00	13·51	7·66	5·62	...	1·72	34·79	33·18	34·00
20·73	22·48	28·99	27·03	2·22	2·18	7·36	6·74	...	...	...	...	25·72	24·06	24·90
29·11	25·92	32·69	29·93	·98	2·32	15·22	17·72	5·89	5·00	58·82	...	32·08	29·40	30·76
24·07	27·48	26·50	24·49	1·97	1·35	21·44	19·98	22·19	12·58	94·34	53·33	26·16	24·33	25·29
22·00	24·36	21·45	22·40	5·91	3·16	24·40	22·37	10·43	5·00	23·81	45·45	21·48	22·07	21·73
24·48	20·36	29·52	27·49	2·60	2·05	38·58	18·67	5·65	...	25·09	25·78	29·15	27·04	28·10
47·32	74·48	39·24	57·02	55·50	63·84	34·23	56·78	30·84	31·13	34·70	50·03	40·05	58·01	46·25
33·01	33·86	38·40	35·25	2·48	2·11	8·21	7·42	11·11	...	...	...	36·70	33·74	35·22
30·65	31·04	31·11	27·71	1·64	2·81	12·53	14·13	12·20	13·91	39·65	22·32	30·58	27·40	29·01
32·43	30·00	33·56	31·68	11·46	11·43	2·81	1·90	5·88	...	...	...	33·19	31·25	32·23
20·83	19·20	24·09	21·67	14·44	13·89	3·63	2·25	7·66	...	290·32	115·38	23·78	21·44	22·61
29·87	19·00	25·61	21·47	12·21	12·18	23·72	14·08	...	...	...	...	25·87	21·23	23·34
19·67	19·49	21·66	21·61	18·11	19·31	13·29	18·13	...	...	...	...	21·28	21·31	21·30
20·25	20·09	21·63	21·48	20·73	20·79	14·45	16·97	7·75	16·53	...	...	21·39	21·26	21·33
23·72	21·11	23·42	22·52	17·91	20·45	18·62	22·81	...	...	...	...	23·46	22·35	22·91
25·76	24·53	29·11	29·21	28·57	11·56	20·87	23·89	111·11	...	...	...	28·60	28·62	28·61
21·55	21·12	22·83	20·92	16·22	15·57	25·32	27·94	22·04	18·96	53.84	52·97	24·26	22·46	23 36
23·22	27·49	23·68	23·73	14·79	14·03	3·56	5·10	29·67	19·57	369·00	400·17	26·17	27·27	26·76
26·96	24·43	27·11	28·00	9·66	13·43	4·75	5·48	...	...	53·73	35·71	26·19	26·70	26·42
18·22	19·30	14·22	13·47	10·46	21·00	6·15	3·86	...	...	231·62	243·35	19·90	20·06	19·98
30·22	34·27	31·56	33·15	14·82	16·50	13·47	17·89	10·45	16·21	224·14	196·53	30·78	32·55	31·61
19·25	19·08	26·21	33·40	...	...	21·05	25·55	15·76	12·85	5·41	8·20	21·06	22·39	21·63
13·00	12·20	22·26	21·65	44·44	...	23·62	11·49	29·41	...	285·71	750·00	15·66	14·93	15·34
14·13	13·31	12·78	12·75	13·33	16·95	...	...	...	...	1·23	1·27	13·29	12·85	13·09
11·14	11·52	15·52	15·97	...	...	...	...	...	...	133·33	17·24	12·33	12·60	12·35
14·98	14.98	18·50	18·81	...	...	...	...	...	...	3·08	11·07	15·52	15·60	15·56
13·78	12·93	23·24	26·75	...	...	12·42	8·55	...	35·71	6·54	4·79	16·44	17·04	16·71
11·29	11·11	18·29	21·76	...	...	...	...	...	...	4·29	15·79	11·99	12·15	12·06
19·58	19·68	28·15	27·16	18·34	16·43	20·25	21·67	26·07	24·51	42·15	44·57	26·26	25·72	26·00

Hindus of all castes. "Other Classes" include Buddhists, Sikhs, Jews and all others.

ANNUAL FORM No. VI.—DEATHS *registered from different causes in the*
Details regarding Births

1	2	3	4 Births.				5	6	7	8	9	10	11 Injuries.	
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female
	A.—DISTRICTS.													
	Western Registration District.													
1	East Khándesh ...	928,925	20,989	19,978	40,967	44·10	798	17	276	16,388	1,305	4,056	1	5
2	West Khándesh ...	568,809	12,120	11,550	23,670	41·61	348	6	58	6,926	232	1,580	3	6
3	Násik ...	705,858	14,210	13,242	27,452	38·89	146	...	193	10,800	767	3,518	1	1
4	Thána ...	694,658	10,997	10,255	21,252	30·59	12	48	90	13,531	219	799	14	8
5	Bombay Suburban ...	96,644	829	778	1,607	16·63	47	6	59	1,401	83	148	6	...
6	Kolába ...	533,270	10,607	9,800	20,407	38·27	67	54	51	10,107	411	1,109	2	4
	Central Registration District.													
7	Ahmednagar ...	667,106	12,724	11,568	24,292	36·41	52	6	7	10,551	3,034	4,260	6	1
8	Poona ...	770,334	14,457	13,402	27,859	36·17	93	15	3	9,811	1,458	3,079	...	1
9	Sholápur ...	574,999	11,168	10,494	21,662	37·67	289	1	...	7,463	1,649	1,200	3	4
10	Sátára ...	964,847	18,384	17,229	35,613	36·91	56	15	796	12,412	1,629	1,537	6	9
11	Ratnágiri ...	1,083,350	19,672	18,542	38,214	35·27	27	92	1	12,775	1,119	4,811	3	1
	Southern Registration District.													
12	Belgáum ...	871,163	17,363	16,438	33,801	38·80	46	45	198	5,313	2,022	2,427	26	19
13	Dhárwár ...	870,565	16,472	15,793	32,265	37·06	30	70	1,211	5,775	655	2,005	21	14
14	Bijápur ...	717,798	13,814	13,065	26,879	37·45	14	31	8	7,005	1,527	1,795	32	20
15	Kánara ...	350,246	6,065	5,681	11,746	33·54	...	191	18	4,712	745	540	10	2
	Gujarat Registration District.													
16	Surat ...	526,465	11,019	10,492	21,511	40·86	2	23	5	4,158	223	4,102	10	9
17	Broach ...	243,112	5,400	5,060	10,460	43·03	1	5	...	2,949	124	1,852	5	4
18	Káira ...	604,528	10,785	9,471	20,256	33·51	22	89	...	4,711	404	5,972	8	10
19	Panch Mahála ...	331,791	6,550	6,271	12,821	38·64	79	20	...	3,254	196	1,168	4	5
20	Ahmedabad ...	568,559	10,314	9,556	19,870	34·93	2	40	...	9,762	314	2,693	4	7
	Sind Registration District.													
21	Karáchi ...	307,576	2,310	1,820	4,130	13·43	224	7	...	3,320	27	240	2	...
22	Hyderabad ...	480,469	4,635	3,694	8,329	17·34	...	5	...	5,337	23	409	3	...
23	Thar and Párkar ...	386,343	3,949	3,141	7,090	18·35	12	191	...	4,232	15	260	2	...
24	Nawábsháh ...	402,915	5,221	3,777	8,998	22·33	...	26	...	4,382	8	300	2	...
25	Larkana ...	562,636	7,532	6,032	13,564	24·11	...	...	...	7,842	16	190	8	7
26	Sukkur ...	394,216	5,851	4,740	10,591	26·87	1	6	...	5,243	20	107	2	2
27	Upper Sind Frontier ...	230,036	2,912	2,263	5,175	22·50	...	3	...	2,537	5	80	16	7
	Total of Districts ...	15,437,218	276,349	254,132	530,481	34·36	2,368	1,012	2,974	192,697	18,230	50,257	200	146
	B.—TOWNS.													
	East Khándesh District.													
1	Jalgaon ...	23,696	297	233	520	21·94	41	...	...	154	69	83	...	...
2	Bhusáwal ...	24,933	314	264	578	23·18	40	...	...	358	9	83	...	...
3	Chopda ...	16,930	158	174	332	19·61	29	...	592	150	...	49	...	...
4	Dharangaon ...	14,824	299	249	548	36·96	16	...	...	159	26	84	...	...
5	Párola ...	12,079	288	239	527	43·63	132	...	...	191	26	62	...	...
6	Amalner ...	17,068	159	156	295	17·28	43	...	...	123	12	65	...	...
7	Erandol ...	12,489	253	243	496	39·71	33	...	...	253	6	49	...	...
8	Nasirabad ...	12,188	282	282	564	46·28	6	...	...	22	46	93	...	...
9	Chálisgaon ...	11,990	163	181	344	28·69	65	...	...	108	14	42	...	...
	West Khandesh District.													
10	Dhulia ...	30,061	599	554	1,153	38·36	23	...	...	216	38	220	1	...
11	Nandurbár ...	13,842	231	187	418	30·20	8	...	...	120	22	65	...	1

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1921.*
also shown, column 4.

RIES.				12	13	14 RATIO OF DEATHS PER 1,000 OF POPULATION.										15
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-Pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.	No.
180	21	8	215	8,862	31,917	·86	·02	·30	17·64	1·40	4·37	·23	9·54	34·36	52·78	1
106	66	6	187	4,812	14,149	·61	·01	·10	12·18	·41	2·78	·33	8·46	24·88	55·75	2
195	52	2	251	6,592	22,267	·21	...	·27	15·30	1·09	4·98	·34	9·34	21·55	55·13	3
193	151	2	368	2,454	17,521	·02	·07	·13	19·48	·31	1·15	·53	3·53	25·22	42·31	4
58	6	...	70	301	2,115	·49	·06	·61	14·50	·86	1·53	·72	3·11	21·88		5
144	60	6	216	3,215	15,230	·13	·10	·10	18·95	·77	2·08	·40	6·03	28·56	45·48	6
184	21	9	221	5,867	23,998	·08	·01	·01	15·82	4·55	6·38	·33	8·79	35·97	46·91	7
225	58	7	291	5,639	20,389	·12	·02	...	12·74	1·89	4·00	·38	7·32	26·47	48·11	8
191	23	2	223	5,407	16,232	·50	·00	...	12·98	2·87	2·09	·39	9·40	28·13	55·55	9
272	90	7	384	5,186	22,015	·06	·02	·88	12·86	1·69	1·59	·40	5·37	22·82	52·62	10
229	311	1	545	6,003	25,373	·03	·09	·00	11·79	1·03	4·44	·50	5·54	23·42	31·50	11
296	48	6	395	8,181	18,627	·05	·05	·23	6·10	2·32	2·79	·45	9·39	21·38	44·88	12
238	38	9	320	8,509	18,575	·04	·08	1·39	6·63	·75	2·30	·37	9·78	21·34	45·85	13
206	29	8	295	5,506	16,181	·02	·04	·01	9·76	2·13	2·50	·41	7·67	22·54	52·42	14
175	12	...	199	4,247	10,652	...	·54	·05	13·45	2·13	1·54	·57	12·13	30·41	39·19	15
131	38	8	196	3,153	11,862	·00	·04	·01	7·90	·42	7·80	·37	5·99	22·53	42·47	16
76	15	7	107	1,427	6,465	·00	·02	...	12·13	·51	7·62	·44	5·87	26·59	49·13	17
228	84	21	351	4,085	15,634	·04	·15	...	7·79	·67	9·88	·58	6·75	25·86	43·78	18
70	34	14	127	1,794	6,638	·24	·06	...	9·81	·59	3·52	·38	5·41	20·01	32·91	19
175	73	21	280	2,631	15,722	·00	·07	...	17·16	·55	4·74	·49	4·63	27·64	44·87	20
45	22	...	69	192	4,079	·73	·02	...	10·80	·09	·78	·22	·62	13·26	24·49	21
42	42	1	88	186	6,048	...	·01	...	11·11	·05	·85	·18	·39	12·59	32·26	22
30	41	...	73	185	4,968	·03	·50	...	10·95	·04	·67	·19	·48	12·86	35·98	23
57	43	...	102	174	4,992	...	·06	...	10·88	·02	·75	·25	·43	12·39	36·24	24
100	38	1	154	231	8,433	...	...	...	13·94	·03	·34	·28	·41	15·00	32·03	25
51	22	...	77	160	5,614	...	·02	...	13·30	·05	·27	·20	·41	14·25	35·81	26
33	3	...	59	57	2,741	...	·01	...	11·03	·02	·35	26	·25	11·92	34·52	27
3,930	1,441	146	5,863	95,056	368,437	·16	·07	·20	12·48	1·18	3·26	·38	6·16	23·89	44·15	
6	...	...	6	178	531	1·73	...	...	6·50	2·91	3·50	·25	7·51	22·40	44·30	1
7	...	...	7	149	646	1·60	...	...	14·36	·36	3·33	·28	5·98	25·91	41·23	2
4	...	...	4	50	874	1·71	...	34·97	8·86	.....	2·89	·24	2·95	51·62	39·19	3
4	...	...	4	160	449	1·08	...	...	10·73	1·75	5·67	·27	10·79	30.29	39·30	4
7	1	...	8	141	560	10·93	...	...	15·81	2·15	5·13	·66	11·68	46·36	40·21	5
5	...	...	5	93	341	2·52	...	...	7·21	·70	3·81	·29	5·45	19·98	44·69	6
4	...	...	4	113	458	2·64	...	...	20·26	·48	3·92	·32	9·05	36·67	47·44	7
1	...	...	1	115	488	·49	...	...	18·63	3·77	7·63	·08	9·44	40·04	47·14	8
2	...	...	2	53	284	5·42	...	...	9·01	1·17	3·50	·17	4·42	23·69	52·85	9
9	1	...	11	271	779	·76	...	...	7·18	1·26	7·32	·37	9·02	25·91	43·51	10
2	1	1	5	108	328	·58	...	...	8·67	1·59	4·70	·36	7·80	23·70	52·85	11

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Inju	
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	B.—Towns—*contd.*													
	Nasik District.													
12	Násik ...	42,715	761	679	1,440	33·71	7	19	1	381	115	399	...	...
13	Yeola ...	13,911	243	170	413	29·69	..	1	...	323	24	88	...	...
14	Málegaon ...	23,711	358	316	674	28·43	...	1	...	255	16	104	...	...
15	Igatpuri ...	9,977	99	114	213	21·35	...	1	48	104	3	54	...	...
16	Manmád ...	11,866	55	62	117	9·86	1	...	1	70	10	19	...	...
17	Trimbak ...	4,538	87	51	138	30·41	4	...	...	57	5	46	...	...
18	Deoláli Cantonment ...	12,640	14	11	25	1·98	...	...	...	10	2	54	...	...
	Thana District.													
19	Thána ...	22,116	247	238	485	21·93	...	4	11	214	39	168	1	...
20	Bhiwandi ...	12,188	134	130	264	21·66	1	...	16	80	27	88	...	...
21	Kalyán ...	17,573	196	149	345	19·63	1	2	25	215	10	66	1	1
22	Bassein ...	10,364	142	131	273	26·34	...	...	30	104	10	52	1	...
	Bombay Suburban District.													
23	Bándra ...	28,738	308	271	579	20·15	1	7	27	89	45	188	2	...
24	Kurla ...	26,059	123	131	254	9·75	...	5	7	387	30	24	...	1
	Kolaba District.													
25	Alibág ...	5,253	58	63	121	23·03	1	...	...	50	4	16	...	...
26	Panwel ...	8,622	101	85	186	21·57	...	...	...	132	5	13	...	...
27	Mahád ...	7,192	76	81	157	21·83	...	2	...	65	2	21	...	...
28	Uran ...	8,135	55	38	93	11·43	...	2	9	92	1	12	...	...
29	City of Bombay ...	1,148,815	9,818	9,015	18,833	16·39	66	394	807	6,822	4,888	23,351	31	9
	Ahmednagar District.													
30	Ahmednagar ...	33,138	443	351	794	23·96	71	...	...	75	70	408	1	...
31	Sangamner ...	12,737	166	152	318	24·97	...	...	...	138	23	28	...	...
32	Ahmednagar Cantonment ...	10,997	143	127	270	24·56	...	...	...	87	24	87	2	1
	Poona District.													
33	Poona City ...	133,122	1,137	989	2,126	15·97	11	49	6	1,527	421	2,390	1	1
34	Poona Suburban ...	13,971	89	66	155	11·09	...	1	...	252	34	48	...	...
35	Bárámati ...	11,905	129	130	259	21·76	4	...	...	148	27	57	...	...
36	Khed ...	7,013	116	103	219	31·23	...	...	...	52	8	16	...	...
37	Lonávala ...	10,471	106	97	203	19·39	...	...	2	121	18	37	...	...
38	Junnár ...	7,376	90	82	172	23·32	...	...	...	62	12	27	...	...
39	Poona Cantonment ...	25,498	52	56	108	4·24	...	...	...	199	33	121	...	...
40	Kirkee do. ...	7,991	86	90	176	22·02	...	...	...	24	26	127	...	...
	Sholapur District.													
41	Sholápur ...	119,347	1,728	1,589	3,317	27·79	45	...	...	3,204	181	434	...	...
42	Bársi ...	22,074	323	324	647	29·31	122	..	...	615	64	34	...	1
43	Pandharpur ...	25,210	339	294	633	25·11	79	1	...	680	158	123	...	...
	Satara District.													
44	Sátára ...	22,454	160	159	319	14·21	...	2	...	245	41	94	3	1
45	Wái ...	10,208	132	126	258	25·27	...	...	...	87	17	30	...	...
46	Karád ...	11,255	84	78	162	14·39	...	...	...	46	12	5	...	...
47	Ashta ...	9,016	116	117	233	25·84	...	...	...	70	13	9	1	...
48	Islámpur ...	7,915	119	73	192	24·26	...	...	4	28	21	49	...	...
	Ratnagiri District.													
49	Ratnágiri ...	18,286	213	165	378	20·67	...	22	...	110	12	54	...	...
50	Vengurla ...	19,126	363	307	670	35·03	...	8	...	182	11	101	...	...
51	Málwan ...	22,213	277	232	509	22·91	...	...	...	236	26	106	...	...
52	Chiplun ...	11,005	135	106	241	21·90	...	1	...	99	16	58	...	...

No. VI—*continued.*

RIES.				12	13	14 RATIO OF DEATHS PER 1,000 OF POPULATION.								From all causes,		15
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	For the year.	Mean of previous five years.	No.
22	...	3	25	473	1,420	·16	·45	·02	8·92	2·69	9·34	·59	11·07	33·24	51·38	12
7	...	...	7	56	499	...	·07	...	23·22	1·72	6·33	·50	4·03	35·87	52·29	13
9	...	2	11	144	531	...	·04	...	10·75	·68	4·39	·46	6·07	22·39	73·12	14
3	...	...	3	31	244	...	·10	4·81	10·42	·30	5 41	·30	3·11	24·46	26·08	15
1	...	...	1	26	128	·09	...	·09	5·89	·84	1·60	·09	2·19	10·79	40·59	16
4	2	...	6	53	171	·88	...	...	12·56	1·10	10·14	1·32	11·68	37·68	43·94	17
2	...	...	2	58	126	...	...	...	·79	·16	4·27	·16	4·59	9·97	68·19	18
11	1	...	13	135	614	...	·18	·50	11·03	1·76	7·60	·59	6·10	27·76	48·19	19
4	...	...	4	86	302	·08	...	1·31	6·56	2·22	7·22	·33	7·06	24·78	34·60	20
10	...	...	12	95	426	·06	·11	1·42	12·23	·57	3·76	·68	5·41	24·24	29·86	21
2	1	...	4	76	276	...	...	2·89	10·03	·97	5·02	·39	7·33	26·63	36·61	22
17	2	...	21	302	680	·03	·24	·94	3·10	1·57	6·54	·73	10·51	23·66	22·27	23
5	...	...	6	38	497	...	·19	·27	14·85	1·15	·92	·23	1·46	19·07	34·03	24
2	...	...	2	35	108	·19	...	...	9·52	·76	3·05	·38	6·66	20·56	45·98	25
1	1	...	2	25	177	...	...	...	15·31	·58	1·51	·23	2·90	20·53	27·04	26
...	1	...	1	44	135	...	·28	...	9·03	·28	2·92	·14	6·12	18·77	31·52	27
2	...	...	2	31	149	...	·25	1·11	11·31	·12	1·48	·25	3·81	18·33	22·11	28
998	2	...	1,040	15,763	53,131	·06	·34	·70	5·94	4·25	20·33	·91	13·72	46·25	48·33	29
2	...	1	4	329	957	2·14	...	...	2·26	2·11	12·31	·12	9·93	28·87	52·79	30
3	...	...	3	50	237	...	...	...	10·44	1·81	2·20	·23	3·93	18·61	32·82	31
2	...	...	5	106	309	...	...	...	7·91	2·18	7·91	·46	9·64	28·10	43·94	32
28	...	...	30	1,306	6,340	·08	·37	·04	11·47	3·16	22·45	·23	9·81	47·61	61·49	33
2	3	...	5	39	379	...	·07	...	18·04	2·43	3·44	·36	2·79	27·13		34
2	...	...	2	97	335	·34	...	...	12·43	2·27	4·79	·17	8·14	28·14	47·34	35
3	...	...	3	54	133	...	...	...	7·42	1·14	2·28	·42	7·71	18·97	34·19	36
10	1	...	11	98	287	...	...	·19	11·56	1·72	3·53	1·05	9·36	27·41	34·01	37
1	...	...	1	32	124	...	...	...	8·41	·27	3·66	·13	4·34	16·81	29·41	38
5	...	1	6	92	451	...	...	...	7·81	1·29	4·75	·23	3·61	17·69	20·13	39
5	...	...	5	35	217	...	...	...	3·00	3·26	15·89	·63	4·38	27·16	42·00	40
51	...	1	52	1,380	5,296	·38	...	...	26·84	1·52	3·64	·43	11·56	44·37	89·32	41
6	...	...	7	150	992	5·53	...	...	27·86	2·90	1·54	·32	6·79	44·94	59·59	42
17	...	...	17	322	1,380	3·13	·04	...	26·97	6·27	4·88	·68	12·77	54·74	57·29	43
19	2	...	25	231	638	...	·09	...	10·91	1·82	4·19	1·11	10·29	28·41	41·92	44
...	...	...	...	58	192	...	...	...	8·52	1·67	2·94	...	5·68	18·81	40·69	45
4	2	...	6	25	94	...	...	...	4·09	1·07	·44	·53	2·22	8·35	32·49	46
4	...	...	5	10	107	...	...	...	7·46	1·44	1·00	·55	1·11	11·86	34·71	47
4	1	...	5	35	142	...	...	·51	3·54	2·65	6·19	·63	4·42	17·94	31·74	48
4	2	...	6	106	310	...	1·20	...	6·02	·66	2·95	·33	5·79	16·95	28·50	49
7	1	...	8	205	515	...	·42	...	9·52	·57	5·28	·42	10·72	26·93	31·44	50
7	4	...	11	151	530	...	...	...	10·62	1·17	4·77	·50	6·80	23·86	26·38	51
2	...	...	2	30	206	...	·09	...	9·00	1·45	5·27	·18	2·73	18·72	7	52

ANNUAL FORM

No.	2 Districts and Towns.	3 Population according to Census of 1921.	Births. Male.	Female.	Total.	Birth rate.	5 Cholera.	6 Small-pox.	7 Plague.	8 Fevers.	9 Dysentery and Diarrhœa.	10 Respiratory Diseases.	11 Injury. Suicide. Male.	Female.
	B.—Towns—*contd.*													
	Belgaum District.													
53	Belgaum ...	36,214	549	512	1,061	29·29	3	3	4	173	33	162	1	...
54	Gokak ...	9,989	176	161	337	33·74	...	...	...	69	17	20	2	1
55	Athni ...	13,538	224	189	413	30·51	...	...	...	82	20	81	1	...
56	Nipani ...	11,878	207	180	387	32·58	...	...	...	44	10	60	...	1
57	Belgaum Cantonment.	6,880	11	5	16	2·32	...	3	...	17	4	19	...	...
	Dharwar District.													
58	Dharwar ...	34,327	481	427	908	26·45	...	...	1	150	49	164	...	...
59	Hubli ...	69,140	1,125	942	2,067	29·90	18	...	1	258	97	402	2	1
60	Gadag-Bettigeri ...	41,158	731	629	1,360	33·04	...	1	2	165	90	115	...	...
61	Ranebennur ...	13,930	285	282	567	40·70	...	...	40	31	14	60	1	1
62	Nawalgund ...	7,089	80	95	175	24·69	...	...	...	31	3	13	...	...
	Bijapur District.													
63	Bijapur ...	32,471	563	511	1,074	33·08	...	...	...	67	39	265	1	...
64	Bagalkot ...	19,471	369	375	744	38·21	...	...	...	231	42	75	...	...
65	Guledgudd ...	14,760	317	300	617	41·80	...	...	...	120	15	40	...	...
66	Ilkal ...	11,856	186	189	375	31·63	...	...	...	70	5	48	...	...
	Kanara District.													
67	Karwar ...	14,463	164	125	289	19·98	...	...	...	63	12	10	1	...
68	Kumta ...	14,291	178	146	324	22·67	...	6	...	72	23	21	...	...
69	Gokarn ...	8,307	123	99	222	26·72	...	...	...	11	19	60	1	...
70	Honawar ...	7,035	98	121	219	31·13	...	...	...	47	14	10	...	...
71	Bhatkal ...	7,134	109	110	219	30·70	...	...	...	59	4	6	...	...
	Surat District.													
72	Surat ...	1,17,428	1,500	1,370	2,870	24·44	5	45	2	327	222	1,612	...	1
73	Bulsar ...	19,681	227	227	454	23·07	...	2	1	102	13	54	...	...
74	Rander ...	10,547	117	112	229	21·71	...	1	1	84	15	59	...	...
	Broach District.													
75	Broach ...	42,626	908	842	1,750	41·05	...	...	...	71	38	453	...	...
76	Jambusar ...	10,217	250	191	441	43·16	...	...	...	138	8	104	...	...
77	Ankleshwar ...	11,756	249	232	481	40·91	...	...	...	203	6	77	2	...
	Kaira District.													
78	Kaira ...	8,277	141	133	274	33·10	...	...	...	62	9	65	...	...
79	Mehmadabad ...	6,236	123	131	254	40·73	...	4	...	59	9	43	...	...
80	Nadiad ...	31,919	591	465	1,056	33·08	...	1	2	495	8	180	1	...
81	Borsad ...	12,113	280	273	553	45·65	...	...	...	75	58	77	...	...
82	Anand ...	11,024	173	145	318	28·85	...	...	...	197	2	19	...	...
83	Umreth ...	14,024	348	298	646	46·06	...	...	...	143	3	129	...	1
84	Dakore ...	7,990	134	126	260	32·54	13	5	...	96	35	75	1	...
85	Kapadvanj ...	14,794	290	254	544	36·77	...	...	...	139	19	154	...	...
	Panch Mahâls District.													
86	Godhra ...	26,969	263	216	479	17·76	6	21	...	382	5	14	...	...
87	Dohad ...	16,071	284	245	529	32·92	58	...	...	264	1	10	...	...
	Ahmedabad District.													
88	Ahmedabad ...	2,70,599	5,397	4,962	10,359	38·28	8	72	3	2,902	385	4,456	1	...
89	Dhandhuka ...	8,056	176	171	347	43·07	...	...	...	126	7	46	1	...
90	Viramgaon ...	26,252	374	382	756	28·80	...	29	...	468	6	180	...	...
91	Dholka ...	12,513	329	303	632	50·51	...	...	...	202	12	112	...	...
92	Ahmedabad Cantonment.	1,945	12	13	25	12·85	...	...	...	19	1	1	...	...

No. VI—*continued.*

RIES.				12	13	14										15
						Ratio of Deaths per 1,000 of population.										
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.		No.
														For the year.	Mean of previous five years.	
13	1	...	15	451	844	·09	·09	·12	4·78	·92	4·48	·42	12·46	23·36	35·61	53
1	...	...	4	107	217	...	...	...	6·91	1·70	2·00	·40	10·71	21·72	49·44	54
8	...	...	9	61	253	...	...	...	6·06	1·48	5·98	·66	4·51	18·69	33·16	55
2	...	...	3	76	193	...	...	...	3·70	·84	5·05	·26	6·40	6·25	31·93	56
...	...	...	...	49	92	...	·44	...	2·47	·58	2·76	...	7·11	13·36	21·44	57
20	1	...	21	340	725	...	...	·03	4·37	1·43	4·78	·61	9·90	21·12	42·72	58
27	...	...	30	542	1,348	·26	...	·01	3·73	1·40	5·82	·44	7·84	19·50	43·13	59
12	...	...	12	608	993	...	·02	·05	4·01	2·19	2·80	·29	14·77	24·13	47·38	60
5	...	1	8	211	364	...	...	2·87	2·23	1·00	4·31	·57	15·15	26·13	59·10	61
1	...	...	1	43	91	...	...	...	4·37	·42	1·84	·14	6·07	12·84	26·91	62
11	...	...	12	375	758	...	...	...	2·06	1·20	8·16	·37	11·55	23·34	38·03	63
5	—	1	6	240	594	...	...	...	11·86	2·16	3·85	·31	12·33	30·51	54·33	64
6	...	...	6	186	367	...	...	...	8·13	1·01	2·71	·41	12·60	24·86	33·17	65
...	...	...	...	223	346	...	...	...	5·90	·42	4·05	...	18·81	29·18	52·18	66
4	...	...	5	83	173	...	...	...	4·36	·83	·69	·34	5·74	11·96	17·01	67
4	...	...	4	90	216	...	·42	...	5·04	1·61	1·47	·28	6·30	15·12	29·28	68
2	...	...	3	130	223	...	...	...	1·32	2·29	7·22	·36	15·65	26·84	42·72	69
...	1	...	1	39	111	...	...	...	6·68	1·99	1·42	·14	5·55	15·78	27·33	70
...	...	...	...	42	111	...	...	...	8·27	·56	·84	...	5·89	15·56	27·45	71
40	3	2	46	1,125	3,384	·04	·38	·02	2·79	1·89	13·73	·39	9·58	28·82	40·72	72
3	...	...	3	108	283	...	·10	·05	5·18	·66	2·74	·15	5·49	14·37	25·55	73
...	...	...	...	61	221	...	·10	·10	7·96	1·42	5·59	...	5·78	20·95	38·63	74
21	2	...	23	524	1,109	...	...	...	1·67	·89	10·63	·54	12·29	26·02	45·05	75
3	...	...	3	53	306	...	...	...	13·51	·78	10·18	·29	5·19	29·95	45·98	76
5	1	...	8	43	337	...	...	...	17·27	·51	6·55	·68	3·66	28·67	35·49	77
3	1	2	6	46	188	...	..	...	7·49	1·09	7·85	·72	5·56	22·71	59·42	78
2	...	...	2	58	175	...	·64	...	9·46	1·44	6·90	·32	9·30	28·06	47·93	79
21	...	1	23	200	909	...	·03	·06	15·51	·25	5·64	·72	6·27	28·48	57·81	80
2	...	...	2	156	368	...	...	...	6·19	4·79	6·35	·17	12·88	30·38	51·07	81
2	...	...	2	20	240	...	...	...	17·87	·18	1·73	·18	1·81	21·77	43·12	82
9	2	1	13	217	505	...	...	...	10·20	·21	9·20	·93	15·47	36·01	48·33	83
5	...	...	6	81	311	1·63	·62	...	12·01	4·38	9·39	·75	10·14	38·92	53·25	84
7	...	...	7	137	456	...	...	...	9·40	1·28	10·41	·47	9·26	30·62	49·32	85
10	1	...	11	34	473	·22	·73	...	14·16	·19	·52	·41	1·26	17·54	26·67	86
...	...	...	...	45	378	3·61	...	...	16·43	·06	·62	...	2·80	23·52	55·64	87
111	2		122	2,902	10,850	·03	·27	·01	10·72	1·43	16·47	·45	10·72	40·10	60·38	88
2	...	1	4	66	249	...	...	...	15·64	·87	5·71	·50	8·19	30·91	61·79	89
4	2	...	6	90	779	...	1·10	...	17·83	·23	6·86	·23	3·43	29·68	54·03	90
2	1	...	3	112	441	...	...	...	16·14	·96	8·95	·24	8·95	35·24	56·86	91
...	...	...	...	7	28	...	...	...	9·77	·51	·51	...	3·60	14·39	35·49	92

ANNUAL FORM

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Inju	
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	Karachi Dis trict.													
93	Karachi ...	199,014	3,995	3,857	7,852	39·45	160	37	54	1,556	295	1,340	...	...
94	Tatta ...	8,470	100	104	204	24·09	...	...	...	81	8	80	...	...
95	Kotri ...	9,072	87	60	147	16·20	10	...	...	91	2	53	...	...
96	Karachi Cantonment .	6,525	120	104	224	34·33	1	...	...	35	...	2	...	...
	Hyderabad District.													
97	Hyderabad ...	72,625	1,612	1,422	3,034	41·78	14	...	...	746	63	985	2	1
98	Halla ...	5,757	41	30	71	12·33	...	...	...	69	...	21	...	...
99	Matiari ...	4,638	89	46	135	29·11	...	...	...	31	3	53	...	...
100	Hyderabad Cantonment.	3,760	24	20	44	11·70	...	...	...	15	...	4	...	...
	Thar and Parkar District.													
101	Umarkot ...	4,199	66	45	111	26·43	...	6	...	52	2	13	...	...
102	Mirpurkhas ...	5,765	37	18	55	9·54	1	...	...	74	...	49	...	...
	Nawabshah District.													
103	Nawabshah ...	2,771	33	28	61	22·01	...	...	...	15	...	19	...	...
104	Tando Adam ...	12,966	115	99	214	16·50	...	...	1	108	...	26	...	...
	Larkana District.													
105	Larkana ...	17,700	307	282	589	33·28	...	...	...	218	6	20	...	...
106	Kambar ...	7,613	88	86	174	22·86	...	...	...	168	...	...	...	...
107	Ratodero ...	5,565	127	118	245	44·03	...	...	...	119	...	2	...	...
108	Sehwan ...	4,423	62	51	113	25·5	1	...	...	31	2	38	...	...
	Sukkur District.													
109	Sukkur ...	42,046	659	564	1,223	29·09	5	1	...	601	14	45	...	...
110	Shikarpur ...	55,347	842	664	1,506	27·21	...	...	...	781	29	80	4	1
111	Rohri ...	11,378	174	178	352	30·93	...	...	...	191	9	17	...	...
112	Gari Yasin ...	6,375	107	88	195	30·59	...	...	...	140	...	...	1	...
	Upper Sind Frontier District.													
113	Jacobabad ...	10,578	141	94	235	22·22	...	...	...	146	2	...	...	...
	Total of Towns ...	3,728,396	49,402	44,757	94,159	25·25	1,153	759	1,698	33,403	8,569	43,099	68	24
	Total for the Presidency.	19,165,614	3,25,751	2,98,889	6,24,640	35·59	3,521	1,771	4,672	2,26,100	26,799	93,336	268	170

No. VI—*concluded.*

RIES.				12	13	14										15
						Ratio of Deaths per 1,000 of population.										
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Babies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.		No.
														For the year.	Mean of previous five years.	
77	...	1	78	3,296	6,816	·80	·19	·27	7·82	1·48	6·73	·39	16·56	34·24	53·70	93
...	...	...	...	78	247	...	...	...	9·56	·94	9·45	...	9·21	29·16	34·73	94
1	1	...	2	17	175	1·11	...	...	10·03	·22	5·84	·22	1·87	19·29	41·39	95
2	...	...	2	122	162	·15	...	...	5·36	.....	·31	·31	18·70	24·83	31·78	96
29	2	...	34	557	2,399	·19	...	...	10·27	·87	13·56	·47	7·67	33·03	43·64	97
...	...	...	...	...	90	...	...	...	11·98	.....	3·65	....	...	15·63	23·34	98
2	...	...	2	35	124	...	...	...	6·68	·65	11·42	·43	7·55	26·73	46·90	99
1	...	...	1	19	39	...	...	...	3·99	.....	1·06	·27	5·05	10·37	19·72	100
2	...	...	2	17	92	...	1·43	...	12·38	·48	3·10	·48	4·05	21·92	57·42	101
...	...	...	...	5	129	·17	...	...	12·84	.....	8·50	...	·87	22·38	52·27	102
...	...	...	...	6	40	...	...	...	5·41	.....	6·86	...	2·17	14·44	32·87	103
...	...	...	...	6	141	...	...	·08	8·33	.....	2·00	...	·46	10·87	33·86	104
7	...	...	7	220	471	...	...	...	12·32	·34	1·13	·39	12·43	26·61	50·19	105
2	1	...	3	4	175	...	...	...	22·07	.....	...	·39	·53	22·99	45·43	106
1	...	...	1	5	127	...	...	...	21·38	.....	·36	·18	·90	22·82	46·12	107
3	...	...	3	22	97	·23	...	...	7·01	·45	8·59	·68	4·97	21·93	44·34	108
14	...	...	14	118	798	·12	·02	...	14·30	·33	1·07	·33	2·81	18·98	40·79	109
2	...	...	7	822	1,719	...	...	...	14·11	·52	1·45	·13	14·85	31·06	50·55	110
...	...	...	...	18	235	...	...	...	16·79	·79	1·49	...	1·58	20·65	53·82	111
...	...	...	1	4	145	...	...	...	21·96	.....	...	·16	·63	22·75	49·26	112
...	...	...	...	12	160	...	...	...	13·80	·19	...	...	1·14	15·13	34·46	113
1,855	51	27	2,025	39,207	1,29,913	·31	·20	·45	8·96	2·30	11·56	·54	10·52	34·84	47·28	
5,785	1,492	173	7,888	1,34,263	4,98,350	·18	·09	·24	11·80	1·40	4·87	·41	7·01	26·00	44·66	

ANNUAL FORM No. VI (*a*).—DEATHS REGISTERED FROM CERTAIN DISEASES IN THE

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	A.—DISTRICTS.													
	Western Registration District.													
1	East Khándesh	928,925	...	...	412	·44	...	...	...	...	4	·00	15,912	17·13
2	West Khándesh	568,809	...	...	48	·09	...	...	...	...	1	·00	6,877	12·09
3	Násik	705,858	1	·00	51	·07	1	·00	...	...	13	·02	10,706	15·17
4	Thána	694,658	...	...	27	·04	...	...	...	...	7	·01	13,394	19·28
5	Bombay Suburban	96,644	...	...	3	·03	...	...	...	...	24	·25	1,374	14·22
6	Kolába	533,270	...	...	26	·05	...	...	...	...	10	·02	10,049	18·85
	Central Registration District.													
7	Ahmednagar	667,106	1	·00	176	·27	40	·06	...	...	3,507	5·26	6,686	10·02
8	Poona	770,334	43	·06	79	·10	...	...	...	...	4,214	5·47	5,445	7·07
9	Sholápur	574,999	40	·07	130	·23	...	...	...	...	207	·36	7,036	12·23
10	Sátára	964,847	39	·04	68	·07	2	·00	...	...	253	·26	11,965	12·40
11	Ratnágiri	1,083,350	3	·00	125	·12	...	...	...	...	167	·15	12,381	11·43
	Southern Registration District.													
12	Belgaum	871,163	890	1·02	45	·05	...	...	...	...	1,530	1·76	2,669	3·07
13	Dhárwár	870,565	227	·26	55	·06	...	...	...	...	1,145	1·31	4,279	4·90
14	Bijápur	717,798	60	·08	51	·07	...	...	...	...	906	1·26	5,884	8·20
15	Kánara	350,246	341	·97	14	·04	...	...	...	...	1,749	4·99	2,522	7·21
	Gujarat Registration District.													
16	Surat	526,465	...	...	7	·01	...	...	...	...	4	·01	4,102	7·79
17	Broach	243,112	...	...	1	·00	...	...	...	...	2	·01	2,916	12·00
18	Kaira	604,528	...	...	51	·08	...	...	...	...	...	...	4,626	7·66
19	Panch Maháls	331,791	...	...	15	·04	...	...	...	...	...	...	3,148	9·49
20	Ahmedabad	568,559	...	...	34	·06	...	...	...	...	2	·00	9,694	17·04
	Sind Registration District.													
21	Karáchi	307,576	37	·12	...	...	...	...	...	...	2,633	8·57	607	1·97
22	Hyderabad	480,469	156	·32	...	...	...	...	...	...	3,056	6·36	2,117	4·41
23	Thar and Párkar	386,343	63	·16	1	·00	...	...	...	...	3,075	7·96	1,087	2·81
24	Nawábshah	402,915	128	·32	4	·01	...	...	...	...	3,026	7·51	1,185	2·94
25	Lárkana	562,636	89	·16	3	·01	...	...	...	...	5,762	10·24	1,936	3·44
26	Sukkur	394,216	65	·16	...	...	...	...	...	...	4,038	10·24	1,138	2·89
27	Upper Sind Frontier	230,036	19	·08	11	·05	...	...	...	...	2,062	8·96	445	1·94
	Total of Districts ...	15,437,218	2,202	·14	1,437	·09	43	·01	...	...	37,397	2·42	150,180	9·73
	B.—TOWNS.													
	East Khandesh District.													
1	Jalgaon	23,696	1	·04	10	·42	...	...	...	...	2	·08	139	5·87
2	Bhusáwal	24,933	...	...	79	3·17	...	...	...	...	...	...	279	11·19
3	Chopda	16,930	...	...	20	1·18	...	...	...	...	...	...	130	7·68
4	Dharangaon	14,824	...	...	22	1·48	...	...	...	...	...	...	111	7·50
5	Parola	12,079	...	...	44	3·64	...	...	...	...	...	...	147	12·17
6	Amálner	17,068	...	...	...	...	...	...	...	...	...	...	89	5·22
7	Erandol	12,489	...	...	...	...	...	...	...	...	...	...	231	18·50
8	Nasirabad	12,188	...	...	...	...	...	...	...	...	...	...	227	18·63
9	Chálisgaon	11,990	...	...	27	2·25	...	...	...	...	...	...	81	6·76
	West Khandesh District.													
10	Dhulia	30,061	...	...	48	1·59	...	...	...	...	3	·10	165	5·49
11	Nandurbar	13,842	...	...	4	·29	...	...	...	...	...	...	115	8·31
	Nasik District.													
12	Násik	42,715	...	...	38	·89	...	...	...	...	3	·07	337	7·89
13	Yeola	13,911	...	...	4	·29	...	...	...	...	...	...	319	22·93

DISTRICTS AND TOWNS OF THE BOMBAY PRESIDENCY DURING THE YEAR 1921.

10 Influenza.		11 Pneumonia.		12 Phthisis.		13 Other Respiratory Diseases.		14 Dysentery.		15 Diarrhœa.		16 Deaths from child birth.	17 Deaths under 1 year.			18 Infant mortality rate per 1,000 births.	19 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
60	·07	1	·00	138	·15	3,917	4·22	42	·05	1,263	1·35	284	4,484	3,893	8,377	204·48	1
...	...	2	·01	74	·13	1,504	2·64	21	·04	211	·37	178	2,107	1,771	3,878	163·84	2
28	·04	38	·05	119	·17	3,361	4·76	44	·06	723	1·03	311	2,701	2,336	5,037	183·12	3
103	·15	16	·02	338	·48	445	·65	89	·13	130	·18	166	1,477	1,297	2,774	130·53	4
...	...	30	·31	37	·38	81	·84	18	·19	65	·67	31	133	147	280	174·24	5
22	·04	18	·03	849	1·59	242	·46	78	·14	333	·63	204	1,577	1,273	2,850	139·65	6
141	·21	42	·06	260	·39	3,958	5·93	218	·33	2,816	4·22	2	2,654	2,206	4,860	260·67	7
30	·04	30	·04	551	·72	2,498	3·24	69	·09	1,389	1·80	97	2,363	1,912	4,275	153·45	8
50	·09	26	·05	213	·37	961	1·67	34	·06	1,615	2·81	88	2,357	1,893	4,250	196·19	9
85	·09	20	·02	451	·47	1,066	1·10	62	·06	1,567	1·63	206	2,740	2,180	4,920	138·15	10
99	·09	15	·01	2,883	2·66	1,913	1·77	873	·80	246	·23	162	1,761	1,512	3,273	85·65	11
179	·20	8	·01	558	·64	1,861	2·14	47	·05	1,975	2·27	102	2,271	1,756	4,027	119·19	12
69	·08	1	·00	446	·51	1,558	1·79	116	·13	539	·62	147	2,345	1,848	4,193	129·52	13
104	·14	3	·00	349	·49	1,443	2·01	180	·25	1,347	1·88	131	1,955	1,547	3,502	130·29	14
86	·24	1	·00	217	·62	322	·92	230	·66	515	1·47	214	1,243	1,023	2,266	192·92	15
45	·09	999	1·90	557	1·06	2,546	4·84	39	·07	184	·35	35	1,513	1,355	2,868	133·33	16
30	·12	297	1·22	205	·85	1,350	5·55	7	·03	117	·48	9	1,001	928	1,929	184·42	17
34	·05	371	·61	1,161	1·92	4,440	7·35	83	·14	321	·53	31	1,785	1,718	3,503	172·76	18
91	·27	114	·34	164	·49	890	2·69	12	·04	184	·55	74	751	662	1,413	110·21	19
32	·06	405	·71	771	1·36	1,517	2·67	117	·20	197	·35	27	1,728	1,515	3,243	163·21	20
43	·14	208	·68	20	·06	12	·04	5	·02	22	·07	37	371	323	694	168·04	21
8	·02	338	·70	8	·02	63	·13	7	·01	16	·03	92	605	514	1,119	134·35	22
6	·02	202	·52	10	·03	48	·12	4	·01	11	·03	52	436	387	823	116·08	23
39	·10	268	·67	12	·03	20	·05	5	·01	3	·01	101	552	462	1,014	112·70	24
52	·09	140	·25	17	·03	33	·06	12	·02	4	·01	128	862	723	1,585	116·85	25
2	·01	74	·19	4	·01	29	·07	7	·02	13	·03	63	778	658	1,436	135·59	26
...	...	67	·30	1	·00	12	·05	1	·00	4	·02	35	306	270	576	111·30	27
1,438	·09	3,734	·24	10,413	·68	36,190	2·34	2,420	·16	15,810	1·02	3,007	42,856	36,109	78,965	148·86	
2	·08	2	·08	17	·72	64	2·70	4	·17	65	2·74	10	62	52	114	219·23	1
...	...	5	·20	6	·24	72	2·89	...	...	9	·36	20	91	66	157	271·63	2
...	...	...	...	2	·12	47	2·77	...	...	...	...	8	18	23	41	123·49	3
26	1·75	...	...	2	·13	82	5·54	...	...	26	1·75	7	58	51	109	198·91	4
...	...	...	...	1	·08	61	5·05	...	...	26	2·15	3	72	54	126	239·09	5
34	1·99	...	...	2	·12	63	3·69	...	...	12	·70	5	30	17	47	159·32	6
22	1·76	...	...	15	1·20	34	2·72	4	·32	2	·16	7	63	41	104	209 68	7
...	...	...	...	...	...	93	7·63	5	·41	41	3·36		75	59	134	237·59	8
...	...	2	·17	2	·17	38	3·16	...	...	14	1·17	1	32	30	62	180·23	9
...	...	46	1·53	44	1·47	130	4·32	9	·30	29	·96	31	79	54	133	115·25	10
1	·07	2	·15	3	·22	60	4·33	...	...	22	1·59	10	46	23	69	165·07	11
3	·07	37	·87	129	3·02	235	5·45	20	·47	95	2·22	28	165	127	292	202·78	12
...	...	...	...	12	·86	76	5·47	...	...	24	1·72	13	60	44	104	251·81	13

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Nasik District—concluded.													
14	Málegaon	23,711	...	...	3	·12	...	...	...	...	...	...	252	10·63
15	Igatpuri	9,977	...	...	...	...	...	...	...	...	2	·20	102	10·22
16	Manmad	11,866	...	...	...	...	...	...	...	...	...	...	70	5·89
17	Trimbak	4,538	...	...	1	·22	...	...	...	...	...	...	51	11·24
18	Deolali Cantonment	12,640	...	...	...	...	2	·16	...	...	1	·08	6	·47
	Thana District.													
19	Thána	22,116	...	...	...	...	...	...	...	...	...	...	244	11·03
20	Bhiwandi	12,188	...	...	...	...	...	...	...	...	...	...	80	6·56
21	Kalyán	17,573	...	...	5	·28	...	...	...	...	1	·06	209	11·89
22	Bassein	10,364	...	...	5	·48	...	...	...	...	1	·10	98	9·45
	Bombay Suburban District.													
23	Bandra	28,738	...	...	5	·18	...	...	...	...	11	·38	67	2·33
24	Kurla	26,059	...	...	...	...	...	...	...	...	...	...	387	14·85
	Kolaba District.													
25	Alibág	5,253	...	...	...	...	...	...	...	...	...	...	49	9·33
26	Panwel	8,622	...	...	3	·35	...	...	...	...	...	...	129	14·96
27	Mahád	7,192	...	...	...	...	...	...	...	...	...	...	65	9·03
28	Uran	8,135	...	...	...	...	...	...	...	...	...	...	90	11·07
29	City of Bombay	1,148,815	130	·12	200	·17	57	·05	...	...	495	·43	4,562	3·97
	Ahmednagar District.													
30	Ahmednagar	33,138	...	...	...	...	...	...	...	...	21	·63	53	1·60
31	Sangamner	12,737	...	...	1	·08	...	...	...	...	65	5·10	67	5·26
32	Ahmednagar Cantonment	10,997	...	...	1	·09	...	...	...	...	6	·54	71	6·46
	Poona District.													
33	Poona City	133,122	205	1·54	202	1·52	5	·04	...	...	401	3·01	711	5·34
34	Poona Subarban ...	13,971	2	·14	4	·29	...	...	...	...	68	4·87	178	12·74
35	Baramati	11,905	1	·08	2	·16	...	...	...	...	1	·08	121	10·16
36	Khed	7,013	1	·14	2	·29	...	...	...	...	16	2·28	33	4·71
37	Lonávla	10,471	...	...	...	...	...	...	...	...	102	9·74	18	1·72
38	Junnar	7,376	...	...	...	...	...	...	...	...	14	1·90	48	6·51
39	Poona Cantonment	25,498	...	...	...	...	...	...	...	...	2	·08	197	7·73
40	Kirkee do.	7,991	...	...	...	...	...	...	...	...	6	·75	18	2·25
	Sholapur District.													
41	Sholápur	119,347	1	·01	287	2·40	...	...	...	...	5	·04	2,600	21·78
42	Bársi	22,074	...	...	16	·72	...	...	...	...	...	...	599	27·14
43	Pandharpur	25,210	2	·08	9	·36	...	...	...	...	2	·08	667	26·46
	Satara District.													
44	Sátára	22,454	2	·09	6	·27	...	...	...	...	...	...	237	10·56
45	Wái	10,208	10	·98	2	·20	3	·30	...	...	5	·49	67	6·55
46	Karád	11,255	1	·09	1	·09	...	...	...	...	...	...	34	3·02
47	Ashta	9,016	...	...	...	...	...	...	...	...	...	...	70	7·46
48	Islámpur	7,915	1	·13	...	...	...	...	...	...	1	·13	19	2·40
	Ratnagiri District.													
49	Ratnágiri	18,256	...	...	5	·27	...	...	...	...	2	·11	101	5·53
50	Vengurla	19,126	...	...	8	·42	...	...	...	...	15	·78	157	8·22
51	Málwan	22,213	...	...	4	·18	...	...	...	...	4	·18	227	10·21
52	Chiplun	11,005	...	...	1	·09	...	...	...	...	...	...	97	8·82
	Belgaum District.													
53	Belgaum	36,214	6	·16	1	·03	...	...	...	...	9	·25	151	4·16
54	Gokák	9,989	31	3·10	...	...	...	...	...	...	7	·70	25	2·51
55	Athni	13,538	...	...	...	...	...	...	...	...	2	·15	74	5·47
56	Nipáni	11,878	1	·08	1	·08	...	...	...	...	8	·67	34	2·85
57	Belgaum Cantonment	6,880	...	...	...	...	...	...	...	...	6	·87	10	1·45

No. VI (*a*)—*continued.*

10		11		12		13		14		15		16	17			18	19
Influenza.		Pneumonia.		Phthisis.		Other Respiratory diseases.		Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
...	...	2	·08	3	·13	99	4·18	...	...	16	·68	5	99	68	167	247·77	14
...	...	3	·30	8	·80	43	4·31	...	...	3	·30	11	15	5	20	93·89	15
...	...	...	...	2	·17	17	1·43	2	·17	8	·67	3	15	11	26	222·22	16
5	1·10	...	...	4	·88	42	9·26	...	...	5	1·10	3	17	10	27	195·65	17
1	·08	41	3·24	11	·87	2	·16	2	·16	...	...	1	7	4	11	440·00	18
...	...	38	1·72	69	3·12	61	2·76	15	·68	24	1·08	13	57	33	90	185·57	19
...	...	41	3·36	40	3·28	7	·58	3	·25	24	1·97	12	29	14	43	162·88	20
...	...	15	·86	19	1·08	32	1·82	3	·17	7	·40	10	38	31	69	200·00	21
...	...	12	1·16	21	2·03	19	1·83	1	·10	9	·87	10	18	27	45	164·83	22
6	·21	82	2·85	47	1·64	59	2·05	13	·45	32	1·12	1	90	55	145	250·43	23
...	...	1	·04	11	·42	12	·46	27	1·04	3	·11	6	29	22	51	200·79	24
1	·19	1	·19	13	2·48	2	·38	...	...	4	·76	2	9	14	23	190·08	25
...	...	...	...	11	1·28	2	·23	...	...	5	·58	1	13	10	23	123·65	26
...	...	1	·14	17	2·36	3	·42	...	...	2	·28	5	11	12	23	146·50	27
2	·24	...	...	8	·98	4	·49	...	...	1	·12	1	11	3	14	150·54	28
1,378	1·20	14,722	12·82	1,447	1·26	7,182	6·25	1,489	1·29	3,399	2·96	471	6,722	5,936	12,658	672·12	29
1	·03	68	2·05	105	3·17	235	7·09	6	·18	64	1·93	2	83	53	136	171·28	30
...	...	...	...	7	·55	21	1·65	3	·24	20	1·57	...	21	18	39	122·64	31
9	·82	13	1·18	12	1·09	62	5·64	...	...	24	2·18	...	32	21	53	199·30	32
3	·02	1,912	14·36	462	3·47	616	4·62	74	·56	347	2·60	70	1,013	850	1,863	876·29	33
...	...	6	·43	3	·22	39	2·79	...	...	34	2·43	...	54	48	102	658·06	34
23	1·93	32	2·69	6	·50	19	1·60	...	...	27	2·27	...	26	25	51	196·91	35
...	...	1	·14	2	·29	13	1·85	...	...	8	1·14	...	13	9	22	100·46	36
1	1·10	7	·67	8	·76	22	2·10	1	·10	17	1·62	3	28	19	47	231·53	37
...	...	...	...	17	2·30	10	1·36	...	...	2	·27	3	10	10	20	116·28	38
...	...	14	·55	28	1·10	79	3·10	19	·74	14	·55	14	37	31	68	629·63	39
...	...	64	8·01	1	·12	62	7·76	5	·63	21	2·63	...	33	25	58	329·55	40
311	2·61	14	·12	95	·80	325	2·72	3	·03	178	1·49	4	746	570	1,316	396·74	41
...	...	...	...	2	·09	32	1·45	...	...	64	2·90	5	136	116	252	391·04	42
...	...	25	·99	19	·75	79	3·14	4	·16	154	6·11	3	270	213	483	763·03	43
...	...	3	·13	45	2·00	46	2·06	3	·03	38	1·69	18	63	53	116	363·64	44
...	...	...	...	15	1·47	15	1·47	...	...	17	1·67	5	19	9	28	108·53	45
10	·89	...	...	1	·09	4	·35	...	...	12	1·07	3	10	9	19	117·28	46
...	...	...	...	3	·33	6	·67	...	...	13	1·44	...	6	7	13	55·79	47
7	·88	...	...	5	·63	44	5·56	...	...	21	2·65	3	9	5	14	72·92	48
2	·11	1	1·05	41	2·24	12	·66	8	·44	4	·22	3	18	20	38	100·53	49
2	·10	5	·26	60	3·14	36	1·88	9	·47	2	·10	1	48	40	88	131·34	50
1	·05	9	·40	48	2·16	49	2·21	23	1·04	3	·13	1	42	31	73	143·22	51
1	·09	...	...	38	3·45	20	1·82	14	1·27	2	·10	...	13	10	23	95·44	52
6	·16	2	·05	113	3·11	47	1·30	4	·11	29	·81	3	80	65	145	136·66	53
6	·60	...	...	11	1·10	9	·90	1	·10	16	1·60	0	33	29	62	183·98	54
6	·44	...	...	24	1·77	57	4·21	...	...	20	1·48	2	31	9	40	96·85	55
...	...	...	...	5	·42	55	4·63	...	...	10	·84	...	21	15	36	93·02	56
1	·15	3	·43	2	·29	14	2·02	...	...	4	·58	3	1	4	5	312·50	57

ANNUAL FORM

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns	Population according to Census of 1921.	Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Dharwar District.													
58	Dhárwár	34,327	18	·52	20	·58	...	...	...	...	5	·14	91	2·64
59	Hubli	69,140	7	·10	12	·17	...	...	...	...	65	·94	155	2·25
60	Gadag Bettigeri	41,158	9	·22	9	·22	...	...	...	...	8	·19	110	2·92
61	Ránebennur	13,930	8	·57	5	·36	...	...	...	...	5	·36	13	·93
62	Nawalgund	7,089	1	·14	...	...	...	...	...	...	2	·28	28	3·95
	Bijapur District.													
63	Bijápur	32,471	12	·37	3	·09	...	...	...	...	29	·89	22	·68
64	Bágalkot	19,471	4	·20	11	·56	...	...	...	...	15	·77	201	10·33
65	Guledgud	14,760	1	·07	2	·13	...	...	...	...	42	2·85	75	5·08
66	Ilkal ...	11,856	2	·17	9	·76	...	...	...	...	14	1·18	45	3·79
	Kanara District.													
67	Kárwár	14,463	...	...	...	...	...	...	...	...	16	1·11	47	3·25
68	Kumta	14,291	6	·42	...	...	...	...	...	...	60	4·20	6	·42
69	Gokarn	8,307	...	...	...	...	...	...	...	...	...	...	11	1·32
70	Honáwar	7,035	...	...	...	...	...	...	...	...	...	...	47	6·68
71	Bhatkal	7,134	6	·85	...	...	...	...	...	...	...	...	53	7·42
	Surat District.													
72	Surat	1,17,428	3	·03	61	·52	...	...	...	...	115	·98	46	·39
73	Bulsar	19,681	...	...	...	...	...	...	...	...	...	...	102	5·18
74	Ránder	10,547	...	...	...	...	...	...	...	...	...	...	84	7·96
	Broach District.													
75	Broach	42,626	...	...	1	·02	...	...	...	...	53	1·25	5	·12
76	Jambusar	10,217	...	...	...	...	...	...	...	...	52	5·09	86	8·42
77	Ankleshwar	11,756	...	...	1	·08	...	...	...	...	...	...	198	16·85
	Kaira District.													
78	Kaira	8,277	...	...	...	...	...	...	...	...	...	...	62	7·49
79	Mehmedabad	6,236	...	...	7	1·13	...	...	...	...	...	...	52	8·33
80	Nadiád	31,919	...	...	...	...	...	...	...	...	...	...	495	15·51
81	Borsad	12,113	...	...	...	...	...	...	...	...	...	...	75	6·19
82	Anand	11,024	...	...	...	...	...	...	...	...	...	...	197	17·87
83	Umreth	14,024	...	...	...	...	...	...	...	...	...	...	143	10·20
84	Dákore	7,990	...	...	4	·50	...	...	...	...	1	·12	91	11·39
85	Kapadvanj	14,794	...	...	7	·47	...	...	...	...	112	7·58	20	1·35
	Panch Mahals District													
86	Godhra	26,969	...	...	23	·85	...	...	...	...	...	...	359	13·31
87	Dohad	16,071	...	...	2	·13	...	...	...	...	...	...	262	16·30
	Ahmedabad District.													
88	Ahmedabad	2,70,599	...	...	620	2·29	...	...	...	...	...	...	2,273	8·40
89	Dhandhuka	8,056	...	...	...	...	...	...	...	...	...	...	126	15·64
90	Viramgaon	26,252	...	...	...	...	...	...	...	...	...	...	468	17·83
91	Dholka ...	12,513	...	...	...	...	...	...	...	...	...	...	201	16·06
92	Ahmedabad Cantonment	1,945	...	...	...	...	...	...	...	...	...	...	19	9·77
	Karachi District.													
93	Karáchi	1,99,014	48	·24	126	·63	...	...	...	...	137	·69	1,117	5·61
94	Tatta	8,470	...	...	...	...	...	...	...	...	17	2·00	64	7·56
95	Kotri	9,072	...	...	2	·22	...	...	...	...	87	9·59	2	·22
96	Karáchi Cantonment	6,525	...	...	...	...	...	...	...	...	...	...	35	5·36

No. VI (*a*)—*continued.*

10		11		12		13		14		15		16	17			18	19
Influenza.		Pneumonia.		Phthisis.		Other Respiratory diseases.		Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
16	·47	6	·17	63	1·83	95	2·76	4	·12	45	1·31	8	55	32	87	95·81	58
19	·27	3	·04	150	2·17	249	3·61	2	·03	95	1·37	6	122	98	220	106·43	59
29	·46	53	1·30	61	1·48	1	·02	35	·85	55	1·34	...	132	117	249	183·09	60
...	...	...	...	20	1·43	40	2·87	...	...	14	1·00	2	64	39	103	181·66	61
...	...	...	...	9	1·26	4	·56	...	...	3	·42	1	5	6	11	62·86	62
1	·03	27	·83	109	3·36	129	3·97	7	·21	32	·98	2	74	46	120	111·73	63
...	...	...	...	23	1·18	52	2·67	3	·15	39	2·01	2	73	70	143	192·20	64
...	...	...	...	10	·67	30	2·04	1	·07	14	·94	4	59	42	101	163·69	65
...	...	...	...	20	1·69	28	2·36	...	...	5	·42	...	30	32	62	165·33	66
...	...	...	...	6	·42	4	·28	3	·21	9	·63	...	12	5	17	58·82	67
...	...	...	...	5	·35	16	1·12	6	·42	17	1·19	4	26	18	44	135·80	68
...	...	16	1·92	17	2·05	27	3·25	18	2·17	1	·12	8	10	12	22	100·00	69
...	...	...	...	6	·85	4	·57	2	·28	12	1·71	4	9	8	17	77·62	70
...	...	...	...	1	·14	5	·70	2	·28	2	·28	...	16	9	25	114·15	71
102	·87	728	6·20	440	3·75	444	3·78	60	·52	162	1·37	78	507	443	950	331·01	72
...	...	14	·71	18	·91	22	1·12	8	·41	5	·25	4	21	31	52	114·54	73
...	...	3	·28	1	·10	55	5·21	10	·95	5	·47	...	20	25	45	196·51	74
12	·28	44	1·03	115	2·70	294	6·90	11	·26	27	·63	...	140	122	262	149·71	75
...	...	13	1·27	7	·69	84	8·22	3	·29	5	·49	...	54	40	94	213·15	76
4	·34	...	...	14	1·19	63	5·36	2	·17	4	·34	...	49	43	92	191·27	77
...	...	2	·24	3	·36	60	7·25	1	·12	8	·97	2	16	24	40	145·99	78
...	...	3	·48	6	·97	34	5·45	2	·32	7	1·12	...	32	21	53	208·66	79
...	...	83	2·61	63	1·97	34	1·06	1	·03	7	·22	...	125	90	215	203·59	80
...	...	11	·90	...	...	66	5·45	57	4·71	1	·08	...	53	53	106	191·68	81
...	...	1	·09	...	...	18	1·64	1	·09	1	·09	...	23	29	52	163·52	82
...	...	2	·14	6	·43	121	8·63	...	...	3	·21	2	71	48	119	184·21	83
...	..	12	1·50	28	3·50	35	4·38	15	1·88	20	2·50	3	34	35	69	265·38	84
...	...	33	2·23	52	3·52	69	4·66	2	·14	17	1·15	1	72	58	130	238·97	85
...	...	...	...	...	...	14	·52	...	...	5	·19	...	68	53	121	252·61	86
...	...	1	·06	...	...	9	·56	...	...	1	·06	1	53	40	93	175·80	87
9	·03	266	·98	782	2·89	3,408	12·60	132	·49	253	·94	110	1,850	1,756	3,606	348·10	88
...	...	6	·74	14	1·74	26	3·23	5	·62	2	·25	...	32	29	61	175·79	89
...	...	23	·88	29	1·10	128	4·88	2	·08	4	·15	4	113	110	223	294·97	90
1	·08	4	·32	40	3·20	68	5·43	1	·08	11	·88	2	74	77	151	238·92	91
...	...	1	·51	...	...	...	...	1	·51	...	...	...	...	3	3	120·00	92
128	·65	479	2·41	233	1·17	628	3·16	35	·17	260	1·31	111	1,175	947	2,122	270·25	93
...	...	52	6·14	15	1·78	13	1·53	3	·35	5	·59	6	23	36	59	289·21	94
...	...	48	5·28	3	·34	2	·22	...	...	2	·22	10	11	13	24	163·27	95
...	...	...	...	...	...	2	·31	...	...	...	...	...	7	8	15	66·96	96

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*concluded.*													
	Hyderabad District.													
97	Hyderabad	72,625	98	1·35	107	1·47	...	...	...	...	372	5·12	134	1·8
98	Halla	5,757	...	...	...	...	...	...	...	...	37	6·42	32	5·56
99	Matiari	4,638	...	...	3	·65	...	...	...	...	24	5·17	4	·86
100	Hyderabad Cantonment	3,760	1	·27	1	·27	...	...	...	...	...	...	13	3·45
	Thar and Parkar District.													
101	Umarkot	4,199	...	...	...	...	...	...	...	...	51	12·14	1	·24
102	Mirpurkhas	5,765	...	...	2	·35	...	...	...	...	64	11·10	...	...
	Nawabshah District.													
103	Nawábsháh	2,771	3	1·08	...	...	...	...	...	...	12	4·33	...	...
104	Tando Adam	12,966	...	...	...	...	...	...	...	...	108	8·33	...	...
	Larkana District.													
105	Lárkána	17,700	...	...	...	...	...	...	...	...	218	12·32	...	...
106	Kambar	7,613	...	...	...	...	...	...	...	...	96	12·61	72	9·46
107	Ratodero	5,565	...	...	...	...	...	...	...	...	40	7·19	79	14·19
108	Sehwan	4,423	...	...	...	...	...	...	...	...	31	7·01	...	...
	Sukkur District.													
109	Sukkur	42,046	1	·02	2	·05	...	...	...	...	1	·02	593	14·11
110	Shikárpur	55,347	10	·18	51	·93	...	...	...	...	22	·39	698	12·61
111	Rohri	11,378	...	...	...	...	...	...	...	...	160	14·06	29	2·55
112	Garhi Yasin	6,375	...	...	...	...	...	...	...	...	135	21·17	5	·79
	Upper Sind Frontier District.													
113	Jacobabad	10,578	...	...	...	...	...	...	...	...	15	1·42	131	12·38
	Total of Towns ...	37,28,396	633	·17	2,162	·58	67	·02	...	...	3,508	·94	24,792	6·65
	Total for the Presidency ...	1,91,65,614	2,835	·15	3,599	·19	110	·01	...	...	40,905	2·13	1,74,972	9·13

N.B.—Districts A in this Statement do not include the population or death
Influenza deaths also included in other fevers.

No. VI (*a*)—*concluded.*

10 Influenza.		11 Pneumonia.		12 Phthisis.		13 Other Respiratory diseases.		14 Dysentery.		15 Diarrhœa.		16 Deaths from child birth.	17 Deaths under 1 year.			18 Infant mortality rate per 1,000 births.	19 No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
35	·48	515	7·09	294	4·05	176	2·42	21	·29	42	·58	53	423	345	768	253·13	97
...	...	21	3·65	...	...	...	...	...	...	...	...	...	6	8	14	197·18	98
...	...	40	8·62	4	·86	9	1·94	...	...	3	·65	10	14	12	26	192·59	99
...	...	4	1·06	...	...	...	...	...	...	...	...	1	2	3		113·64	100
...	...	10	2·38	2	·48	1	·24	...	...	2	·48	4	10	5	15	135·14	101
8	1·39	36	6·26	1	·17	12	2·07	...	...	...	...	4	15	6	21	381·82	102
...	...	17	6·14	...	...	2	·72	...	...	...	...	3	5	3	8	131·15	103
...	...	15	1·15	9	·69	2	·16	...	...	...	...	6	16	13	29	135·51	104
...	...	13	·73	5	·28	2	·12	5	·28	1	·06	41	76	86	162	275·04	105
...	...	...	...	...	...	...	...	...	...	...	...	4	17	20	37	212·64	106
...	...	...	...	1	·18	1	·18	...	...	...	...	3	21	18	39	159·18	107
...	...	16	3·61	11	2·49	11	2·49	2	·45	...	...	1	3	9	12	106·19	108
4	·10	38	·90	4	·10	3	·07	1	·02	13	·31	30	134	108	242	197·87	109
...	...	41	·75	14	·25	25	·45	3	·05	26	·47	90	299	316	615	408·37	110
2	·18	11	·97	...	...	6	·53	3	·26	6	·53	14	51	28	79	224·43	111
...	...	...	...	...	...	...	...	...	...	...	...	4	22	31	53	271·79	112
...	...	...	...	...	...	...	...	2	·19	...	...	3	24	25	49	208·51	113
2,241	·60	19,943	5·35	5,858	1·57	17,298	4·64	2,246	·60	6,323	1·70	1,494	17,375	14,914	32,289	343·26	
3,679	·19	23,677	1·23	16,271	·85	53,388	2·79	4,666	·24	22,133	1·16	4,501	60,231	51,023	1,11,254	178·11	

of Towns B. In all other Statements "Districts" include Towns.

ANNUAL FORM No. VII.—DEATHS *registered from* CHOLERA *in the*

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.							
		Number in each District.	Number from which deaths from cholera were reported.	Number in each District.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	22	1,478	129	...	...	...	...	1	5
2	West Khándesh ...	16	8	1,242	78	...	...	...	...	...	8
3	Násik	19	13	1,667	20	...	...	...	...	...	4
4	Thána	15	4	1,546	4	...	...	...	...	1	1
5	Bombay Suburban ...	4	2	86	4	...	...	...	...	...	2
6	Kolába	14	5	1,482	16	11	...	...	...	...	.....
7	City of Bombay ...	1	1	1	1	...	1	...	...	3	9
	Central Registration District.										
8	Ahmednagar	15	4	1,346	16	...	...	...	...	...	.....
9	Poona	20	6	1,157	15	1	..	1	..	...	1
10	Sholápur	10	10	718	4	...	...	...	1	...	.....
11	Sátára	19	6	1,342	10	...	...	...	...	...	.....
12	Ratnágiri	15	5	1,305	7	...	...	...	2	...	1
	Southern Registration District.										
13	Belgaum	15	3	1,069	13	...	...	2	...	...	.....
14	Dhárwár	18	3	1,277	9	...	...	...	1	...	.....
15	Bijápur...	13	2	1,128	5	...	...	...	...	...	.....
16	Kánara...	16	...	1,264	...	...	...	...	...	...	.....
	Gujarati Registration District.										
17	Surat	12	2	782	3	...	...	...	...	2	3
18	Broach...	9	1	404	1	...	...	...	...	1	.....
19	Kaira	15	2	579	3	...	...	...	...	11	2
20	Panch Mahals ...	7	5	668	20	...	...	...	...	28	92
21	Ahmedabad	13	2	871	3	...	...	...	...	3	7
	Sind Registration District.										
22	Karáchi	16	7	793	28	...	...	...	...	...	4
23	Hyderabad	11	1	862	1	...	...	...	...	...	.....
24	Thar and Párkar ...	13	3	904	4	...	...	...	...	...	.....
25	Nawábsháh	9	...	731	...	...	...	...	...	...	.....
26	Lárkána	15	1	763	1	...	...	...	...	...	.....
27	Sukkur...	12	2	671	4	...	...	...	...	1	.....
28	Upper Sind Frontier.	6	...	410	...	...	...	...	...	...	.....
	Total for the Presidency.	364	120	26,546	447	12	1	3	4	51	139

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1921.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	6 TOTAL. Female.	6 TOTAL. Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Female.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
226	860	99	11	1	...	606	597	1,203	1·11	1·13	1·12	9·7	1
38	209	114	10	...	...	184	195	379	·59	·64	·62	1·84	2
54	80	16	4	...	...	83	75	158	·20	·18	·19	1·41	3
...	4	8	...	...	...	6	8	14	·02	·02	·02	1·02	4
...	3	31	12	...	...	25	23	48	·29	·36	·32		5
1	1	41	3	1	10	30	38	68	·11	·13	·12	3·15	6
13	27	9	4	...	...	48	18	66	·06	·0 5	·06	2·15	7
1	69	53	...	...	...	62	61	123	·17	·17	·17	1·32	8
5	39	23	14	17	7	50	58	108	·10	·12	·11	1·06	9
30	341	153	10	...	...	273	262	535	·71	·73	·72	1·26	10
4	33	14	...	...	...	29	27	56	·06	·05	·05	·96	11
...	13	9	2	...	...	13	14	27	·02	·02	·02	·53	12
...	2	5	35	5	...	30	19	49	·06	·04	·05	1·51	13
...	13	18	16	...	...	28	20	48	·05	·04	·05	1·03	14
...	10	4	...	...	...	7	7	14	·02	·02	·02	1·53	15
...	...	...	...	...	...	...	...	...	...	...	...	·35	16
...	2	...	...	...	...	5	2	7	·01	.01	·01	·84	17
...	...	...	...	...	...	...	1	1	...	·01	·00	·83	18
...	...	3	19	...	...	26	9	35	·06	·03	·05	·88	19
21	2	...	...	...	...	69	74	143	·36	·41	·38	·59	20
...	...	...	...	...	...	6	4	10	·01	·01	01	·19	21
27	96	71	151	45	1	111	184	295	·70	·81	·74	·33	22
...	5	9	...	...	...	8	6	14	·03	·02	·02	·11	23
...	...	...	13	...	...	9	4	13	·05	·03	·03	·00	24
...	...	...	...	...	...	...	...	...	...	...	...	·03	25
..	1	...	...	...	...	...	1	1	...	·00	·00	·03	26
...	...	...	3	2	...	3	3	6	·02	·01	·01	·16	27
...	...	...	...	...	...	...	...	...	...	...	...	·05	28
420	1,815	680	307	71	18	1,811	1,710	3,521	·18	·19	·18	1·01	

ANNUAL FORM No. VIII.—DEATHS *registered from* SMALL-POX *in the*

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.							
		Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	6	1,478	11	...	3	...	5	2	2
2	West Khándesh ...	10	2	1,242	2	...	...	...	...	5	1
3	Násik	19	4	1,667	4	...	...	...	8	5	2
4	Thána	15	11	1,546	21	...	5	10	14	10	1
5	Bombay Suburban ...	4	3	86	5	1	2	2	3	7	...
6	Kolába	14	9	1,482	26	5	4	7	3	7	5
7	City of Bombay ...	1	1	1	1	12	38	123	97	48	32
	Central Registration District.										
8	Ahmednagar	15	3	1,346	2	..	...	...	...	...	5
9	Poona	20	8	1,157	17	2	3	5	10	8	10
10	Sholápur	10	2	718	2	...	...	1	...	...	...
11	Sátára	19	9	1,342	13	...	...	5	2	2	4
12	Ratnágiri	15	13	1,305	56	8	8	14	24	15	15
	Southern Registration District.										
13	Belgaum	15	8	1,069	23	7	5	10	6	...	4
14	Dhárwár	18	10	1,277	31	11	5	13	6	6	7
15	Bijápur	13	5	1,128	18	6	4	6	4	4	3
16	Kánara	16	8	1,264	60	23	31	44	27	14	24
	Gujarát Registration District.										
17	Surat	12	9	782	16	2	1	4	12	20	13
18	Broach	9	2	404	2	...	...	...	3	...	...
19	Kaira	15	9	579	25	11	13	10	15	13	4
20	Panch Mahâls	7	3	668	5	...	...	...	...	...	7
21	Ahmedabad	13	7	871	21	19	18	39	36	24	4
	Sind Registration District.										
22	Karáchi	16	2	793	3	2	...	...	7	11	14
23	Hyderabad	11	2	862	4	3	...	2	...	...	...
24	Thar and Párkar ...	13	10	904	49	59	46	77	12	2	..
25	Nawábsháh	9	4	731	6	20	5	...	...	...	...
26	Lárkâna	15	...	763	...	...	...	...	...	...	...
27	Sukkur	12	3	671	4	...	...	4	...	...	1
28	Upper Sind Frontier ...	6	1	410	2	...	3	...	...	...	..
	Total for the Presidency.	364	154	26,546	431	191	194	376	294	212	158

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1921.*

July.	August.	September.	October.	November.	December.	6 Total. Male.	6 Total. Female.	6 Total. Total.	7 Number of these Deaths among Children. Under 1 year.	7 Number of these Deaths among Children. Under 10 years.	8 Total ratio of Deaths per 1,000 of Population. Male.	8 Total ratio of Deaths per 1,000 of Population. Female.	8 Total ratio of Deaths per 1,000 of Population. Total.	9 Mean ratio per 1,000 of previous five years.	10 No.
...	2	...	...	...	3	8	9	17	4	12	·01	·02	02	·47	1
...	...	...	...	...	...	4	2	6	1	5	·01	·01	·01	1·01	2
5	1	...	...	1	...	8	14	22	8	7	·02	·03	·03	·25	3
4	2	2	1	3	2	33	21	54	26	24	·09	·06	·07	·22	4
1	...	...	2	...	...	10	8	18	3	10	·12	·13	·12		5
7	12	5	...	3	...	32	26	58	12	37	·11	·09	·10	·30	6
25	10	5	2	1	1	231	163	394	77	144	·31	·41	·34	·89	7
1	...	...	...	...	...	4	2	6	2	3	·01	·01	·01	·17	8
10	6	3	1	2	5	29	36	65	20	39	·06	·07	·07	·28	9
...	...	...	1	...	...	1	1	2	...	2	...	...	...	·31	10
2	2	...	...	...	...	8	9	17	4	6	·02	·02	·02	·08	11
5	7	5	2	6	14	67	56	123	15	44	·13	·09	·11	·22	12
4	4	3	5	...	3	25	26	51	17	19	·05	·06	·05	·11	13
7	7	1	1	2	5	35	36	71	22	19	·07	·07	·07	·13	14
2	...	...	...	1	1	15	16	31	7	16	·04	·04	·04	·10	15
11	7	2	2	2	10	96	101	197	20	36	·47	·51	·49	·59	16
1	8	...	...	1	...	39	32	71	24	37	·12	·10	·11	·06	17
2	...	...	...	...	...	4	1	5	2	1	·03	·01	·02	·13	18
3	3	...	...	11	16	50	49	99	25	60	·13	·15	·14	·08	19
12	4	1	...	...	17	17	24	41	11	22	·09	·13	·11	·06	20
...	...	...	...	1	...	80	61	141	39	72	·17	·15	·16	·16	21
1	...	...	...	...	9	24	20	44	4	11	·08	·09	·08	·28	22
...	...	...	...	...	...	4	1	5	...	1	·01	·00	·01	·18	23
1	...	...	...	...	...	113	84	197	4	10	·51	·48	·50	·04	24
1	...	...	...	...	...	6	20	26	5	17	·03	·11	·06	·13	25
...	...	...	...	...	...	...	...	...	...	...	...	...	...	·22	26
2	...	...	...	...	...	5	2	7	...	...	·02	·01	·01	·09	27
...	...	...	...	...	...	2	1	3	2	1	·01	·01	·01	·09	28
107	75	27	17	34	86	950	821	1,771	363	655	·09	·09	·09	·24	

ANNUAL FORM No. IX.—DEATHS *registered from* FEVERS *in the*

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.							
		Number in each District.	Number from which deaths from fevers were reported.	Number in each District.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	22	1,478	1,395	1,557	1,466	1,805	1,791	1,601	830
2	West Khándesh ...	10	10	1,242	1,050	692	625	787	641	404	259
3	Násik	19	19	1,667	1,470	1,183	1,109	1,259	1,173	771	539
4	Thána	15	15	1,546	1,464	1,670	1,951	2,086	1,413	953	721
5	Bombay Suburban.	4	4	86	75	185	187	197	199	132	105
	Kolába	14	14	1,482	1,366	1,117	1,227	1,249	953	658	498
7	City of Bombay	1	1	1	1	593	672	903	988	633	381
	Central Registration District.										
8	Ahmednagar ...	15	15	1,346	1,254	819	726	859	848	646	433
9	Poona	20	20	1,157	1,081	1,167	1,068	1,304	1,230	872	665
10	Sholápur	10	10	718	642	952	819	1,326	1,333	1,071	639
11	Sátára	19	19	1,342	1,250	1,031	1,000	1,511	1,354	1,172	763
12	Ratnágiri	15	15	1,305	1,218	1,235	1,419	1,453	1,437	1,152	907
	Southern Registration District.										
13	Belgaum	15	15	1,069	896	339	365	882	829	584	342
14	Dhárwár	18	18	1,277	1,073	591	497	915	836	520	379
15	Bijápur	13	13	1,128	1,001	590	505	871	909	650	465
16	Kánara	16	16	1,264	976	477	395	558	706	342	333
	Gujarát Registration District.										
17	Surat	12	12	782	610	478	519	611	443	361	272
18	Broach	9	9	404	387	331	316	306	267	211	163
19	Kaira	15	15	579	534	644	592	728	635	442	346
20	Panch Mahális ...	7	7	668	558	384	486	474	323	231	214
21	Ahmedabad ...	13	13	871	866	1,633	1,118	1,129	1,128	964	656
	Sind Registration District.										
22	Karáchi	16	16	793	793	689	847	412	312	259	310
23	Hyderabad ...	11	11	862	862	885	780	737	560	479	379
24	Thar and Párkar...	13	13	904	904	509	607	463	368	390	291
25	Nawabshah ...	9	9	731	731	567	606	624	424	306	297
26	Lárkána	15	15	763	763	1,172	1,256	878	756	514	393
27	Sukkur	12	12	671	671	944	794	757	569	493	428
28	Upper Sind Frontier	6	6	410	410	337	382	222	221	185	165
	Total for the Presidency ...	364	364	26,546	24,331	22,771	22,334	25,306	22,696	16,996	12,173

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1921.*

July.	August.	September.	October.	November.	December.	6 Total. Male.	6 Total. Female.	6 Total. Total.	7 Ratio of Deaths per 1,000 of Population. Male.	7 Ratio of Deaths per 1,000 of Population. Female.	7 Ratio of Deaths per 1,000 of Population. Total.	8 Mean ratio per 1,000 previous five years.	9 No.
1,104	1,983	1,728	1,444	1,444	1,358	9,286	8,825	18,111	17·03	16·66	16·85	27·82	1
392	680	682	672	761	667	3,662	3,600	7,262	11·83	11·87	11·85	28·73	2
716	976	1,011	1,023	1,181	1,059	6,368	5,632	12,000	15·24	13·85	14·54	31·32	3
603	920	798	880	1,053	1,146	7,424	6,750	14,174	19·12	18·31	18·73	30·38	4
168	136	139	159	164	168	1,069	808	1,877	12·20	12·65	12·39		5
543	735	759	688	984	1,035	5,324	5,122	10,446	19·06	18·12	18·57	28·79	6
399	481	484	508	420	360	4,083	2,739	6,822	5·44	6·90	5·94	4·26	7
607	975	1,096	1,157	1,318	1,382	5,682	5,164	10,846	15·66	14·30	14·98	24·04	8
752	966	1,096	973	973	1,130	6,734	5,462	12,196	13·45	11·21	12·35	24·18	9
863	1,165	1,124	911	849	910	6,391	5,568	11,962	16·72	15·50	16·13	32·47	10
857	1,126	1,133	966	989	986	6,809	6,079	12,888	13·32	11·82	12·57	28·37	11
887	1,020	849	835	991	1,217	6,259	7,143	13,402	11·92	11·36	11·61	17·76	12
406	413	380	351	353	454	2,966	2,732	5,698	6·12	5·85	6·00	16·18	13
351	379	462	460	477	543	3,292	3,118	6,410	6·23	6·14	6·19	18·34	14
533	603	581	621	588	577	3,843	3,650	7,493	9·49	9·33	9·41	27·77	15
323	347	302	353	384	444	2,377	2,587	4,964	11·65	13·10	12·36	19·29	16
275	313	327	301	394	377	2,368	2,303	4,671	7·02	6·84	6·93	17·68	17
180	235	268	336	443	305	1,648	1,713	3,361	10·39	11·48	10·94	23·43	18
268	319	423	580	544	456	3,042	2,935	5,977	8·01	8·86	8·41	17·86	19
161	309	363	369	353	233	2,000	1,900	3,900	10·34	10·47	10·40	20·87	20
490	665	1,056	1,396	1,801	1,413	6,937	6,542	13,479	14·64	15·79	15·18	23·04	21
207	290	390	479	476	412	2,877	2,206	5,083	9·51	9·67	9·58	20·51	22
297	336	410	409	444	482	3,552	2,646	6,198	11·21	10·57	10·93	28·20	23
217	169	235	287	385	417	2,462	1,896	4,358	11·14	10·82	11·00	34·14	24
210	171	231	333	418	318	2,493	2,012	4,505	10·66	10·89	10·76	34·74	25
354	383	497	505	963	707	4,705	3,673	8,378	14·21	13·77	4·01	31·19	26
373	391	456	553	683	515	3,866	3,090	6,956	13·73	13·56	13·66	34·09	27
120	127	190	242	283	209	1,510	1,173	2,683	11·24	11·04	11·15	32·53	28
12,594	16,613	17,470	17,741	20,116	19,290	119,032	107,068	226,100	11·85	11·74	11·80	24·36	

ANNUAL FORM NO. X.—DEATHS *registered from* DYSENTERY *and* DIARRHŒA

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	21	1,478	391	59	53	69	90	79	69
2	West Khándesh ...	10	10	1,242	118	21	13	9	17	7	9
3	Násik	16	16	1,667	335	49	51	56	59	56	47
4	Thána	15	15	1,546	122	25	38	29	30	15	8
5	Bombay Suburban ...	4	4	86	27	16	16	17	10	11	5
6	Kolába...	14	14	1,482	209	38	26	36	30	20	19
7	City of Bombay ...	1	1	1	1	443	374	505	399	371	294
	Central Registration District.										
8	Ahmednagar	15	15	1,346	751	180	156	154	157	167	131
9	Poona	20	20	1,157	488	133	145	119	151	145	129
10	Sholápur	10	10	718	446	99	70	80	88	88	98
11	Sátára	19	19	1,342	509	107	88	116	105	139	103
12	Ratnágiri	15	15	1,305	368	122	106	99	118	66	63
	Southern Registration District.										
13	Belgaum	15	15	1,069	551	127	109	157	131	163	161
14	Dhárwár	18	18	1,277	287	60	59	75	66	68	70
15	Bijápur	13	13	1,128	457	99	80	80	102	77	99
16	Kánara	16	16	1,264	284	82	66	58	47	54	61
	Gujarát Registration District.										
17	Surat	12	12	782	130	39	33	36	40	54	40
18	Broach...	9	9	404	76	10	13	9	14	16	10
19	Kaira	15	15	579	175	50	31	42	32	38	35
20	Panch Mahális ...	7	7	668	85	5	10	8	7	6	8
21	Ahmedabád ...	13	13	871	178	64	43	49	33	52	28
	Sind Registration District.										
22	Karáchi	16	12	793	18	10	7	11	10	9	10
23	Hyderabad	11	8	862	17	8	3	4	4	2	7
24	Thar and Párkar ...	13	6	904	12	2	...	3	1	1	...
25	Nawabshah	9	4	731	5	3	...	...	1	1	...
26	Lárkána	15	10	763	8	2	1	9	...	...	...
27	Sukkur...	12	7	671	9	4	3	7	7	9	
28	Upper Sind Frontier .	6	3	410	3	1	...	...	1	...	...
	Total for the Presidency	364	328	26,546	6,060	1,858	1,599	1,837	1,750	1,714	1,509

in the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1921.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	Female.	Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	Female.	Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
216	352	236	143	67	75	774	739	1,513	1·42	1·40	1·41	1·61	1
32	61	75	27	11	10	172	120	292	·56	·40	·48	·85	2
109	168	134	100	69	44	554	388	942	1·32	·95	1·14	1·54	3
28	53	19	20	17	23	189	116	305	·49	·31	·40	1·00	4
16	20	13	11	9	14	102	56	158	1·16	·88	1·04		5
60	64	47	31	17	35	248	175	423	·89	·62	·75	1·72	6
337	481	529	440	351	364	2,832	2,056	4,888	3·73	5·26	4·25	3·10	7
360	584	468	346	238	210	1,740	1,411	3,151	4·79	3·91	4·35	2·86	8
206	241	287	215	141	115	1,122	905	2,027	2·24	1·86	2·05	2·87	9
245	461	384	224	123	92	1,111	941	2,052	2·91	2·62	2·77	3·10	10
196	256	219	175	111	118	939	794	1,733	1·84	1·54	1·69	2·79	11
97	154	108	69	88	94	637	547	1,184	1·21	·87	1·03	1·45	12
205	271	221	241	131	139	1,018	1,088	2,106	2·10	2·34	2·22	3·66	13
82	103	105	79	69	72	486	422	908	·92	·83	·88	1·59	14
200	252	237	169	137	96	826	802	1,628	2·04	2·05	2·04	2·92	15
70	103	89	75	50	62	457	360	817	2·24	1·82	2·03	2·73	16
45	54	54	28	29	21	258	215	473	·76	·64	·70	1·12	17
14	21	24	20	14	11	96	80	176	·61	·54	·57	1·13	18
32	60	97	64	42	24	308	239	547	·81	·72	·77	1·45	19
11	57	51	26	9	4	99	103	202	·51	·57	·54	·68	20
28	85	104	81	83	75	409	316	725	·86	·76	·82	1·51	21
19	85	83	54	18	16	187	145	332	·62	·64	·63	·38	22
3	11	14	11	13	9	58	31	89	·18	·12	·16	·37	23
....	...	...	2	6	2	14	3	17	·06	·02	·04	·12	24
...	...	...	1	1	1	5	3	8	·02	·02	·02	·07	25
...	...	3	2	3	4	16	8	24	·05	·03	·04	·04	26
4	2	3	15	1	12	43	29	72	·15	·13	·14	·15	27
3	1	...	...	...	1	2	5	7	·01	·05	·03	·12	28
2,618	4,000	3,604	2,669	1,898	1,713	14,672	12,127	26,799	1·46	1·33	1·40	1·75	

ANNUAL FORM NO. XI.—DEATHS *registered from* RESPIRATORY DISEASES *in*

1	2	3		4		5					
	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		January.	February.	March.	April.	May.	June.
		Number in each District.	Number from which deaths from Respiratory Diseases were reported.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.						
	Western Registration District.										
1	East Khándesh ...	22	22	1,478	963	560	511	433	348	293	215
2	West Khándesh ...	10	10	1,242	532	212	192	169	153	103	71
3	Násik ...	19	19	1,667	989	502	433	445	347	250	209
4	Thána ...	15	15	1,546	316	132	126	160	114	99	56
5	Bombay Suburban ...	4	4	86	35	51	36	43	25	37	24
6	Kolába ...	14	14	1,482	466	123	111	91	94	84	86
7	City of Bombay ...	1	1	1	1	2,402	2,558	3,044	2,771	2,159	1,507
	Central Registration District.										
8	Ahmednagar ...	15	15	1,346	984	459	395	387	378	249	229
9	Poona ...	20	20	1,157	708	787	566	638	543	451	343
10	Sholápur ...	10	10	718	431	189	141	196	134	134	86
11	Sátára ...	19	19	1,342	509	156	147	175	156	152	93
12	Ratnágiri ...	15	15	1,305	999	521	478	488	447	392	365
	Southern Registration District.										
13	Belgaum ...	15	15	1,069	626	203	240	346	283	241	135
14	Dhárwár ...	18	18	1,277	639	275	261	336	252	214	153
15	Bijápur ...	13	13	1,128	660	206	211	270	245	188	143
16	Kánara ...	16	16	1,264	266	68	43	77	53	50	45
	Gujarát Registration District.										
17	Surat ...	12	12	782	641	633	670	645	496	443	307
18	Broach ...	9	9	404	313	276	239	297	224	175	149
19	Kaira ...	15	15	579	528	699	686	812	627	513	378
20	Panch Maháls ...	7	7	668	369	155	161	164	108	59	45
21	Ahmedabad ...	13	13	871	569	960	765	834	675	547	342
	Sind Registration District.										
22	Karáchi ...	16	14	793	81	319	291	180	129	98	96
23	Hyderabad ...	11	11	862	49	272	317	250	136	77	42
24	Thar and Párkar ...	13	13	904	111	66	61	91	33	21	6
25	Nawábshah ...	9	9	731	61	58	136	68	15	14	16
26	Lárkána ...	15	12	763	25	45	75	46	13	11	7
27	Sukkur ...	12	11	671	26	90	51	35	16	10	1
28	Upper Sind Frontier.	6	4	410	30	40	26	7	2	...	1
	Total for the Presidency ...	364	356	26,546	12,127	10,459	9,932	10,782	8,822	7,064	5,150

the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1921.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	Female.	Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	Female.	Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
257	444	420	352	401	427	2,525	2,141	4,666	4·63	4·04	4·33	4·86	1
103	160	148	152	172	210	1,035	830	1,865	3·34	2·73	3·04	3·59	2
272	333	349	350	373	414	2,254	2,028	4,282	5·38	4·99	5·19	5·08	3
58	83	81	81	93	91	720	453	1,173	1·85	1·23	1 55	1·68	4
28	29	25	19	18	25	221	139	360	2·52	2·18	2·38		5
84	107	92	96	101	102	705	466	1,171	2·52	1·65	2·08	2·42	6
1,549	1,572	1,500	1,500	1,383	1,406	13,466	9,885	23,351	17·91	24·91	20·93	19·22	7
338	428	439	416	513	552	2,413	2,370	4,783	6·65	6·56	6·61	5·53	8
402	515	527	507	534	684	3,387	3,115	6,502	6·77	6·41	6·59	6·61	9
122	146	173	146	150	174	889	902	1,791	2·32	2·52	2·42	2·84	10
116	139	145	153	139	153	877	847	1,724	1·72	1·65	1·68	2·13	11
433	378	398	385	394	451	2,889	2,241	5,130	5·50	3·56	4·45	4·41	12
196	189	216	234	214	272	1,451	1,318	2,769	2·99	2·83	2·92	3 57	13
172	205	221	153	224	231	1,368	1,391	2,759	2·59	2·74	2·66	4·34	14
148	154	160	153	162	183	1,264	959	2,223	3·12	2·45	2·79	3·59	15
40	47	50	60	55	59	363	284	647	1·78	1·44	1·61	1·64	16
403	387	459	384	466	534	3,239	2,588	5,827	9·60	7·68	8·64	11·27	17
143	215	162	201	205	200	1,353	1,133	2,486	8·53	7·60	8·10	10·09	18
332	398	526	620	613	510	3,836	2,878	6,714	1 ·10	8·69	9·44	10·04	19
71	90	83	6	84	96	695	497	1,192	3·59	2·74	3·18	2·61	20
298	390	563	659	705	750	4,162	3,326	7,488	8·78	8·03	8·43	10·19	21
89	121	106	84	79	123	1,021	694	1,715	3·37	3·04	3·23	2·61	22
35	53	50	65	64	81	842	630	1,472	2·66	2 52	2·59	1 89	23
8	5	4	4	7	16	190	132	322	·86	·75	·81	1.08	24
8	3	8	7	4	13	218	127	345	·93	·69	·82	.41	25
5	10	11	4	10	13	166	84	250	·50	·31	·42	·22	26
11	8	4	11	5	7	166	83	249	·59	·37	·49	·38	27
1	...	2	1	...	...	42	38	80	·31	·36	·33	·20	28
5,722	6,608	6,917	6,935	7,168	7,777	51,75	41,579	93,336	5·15	4·56	4·87	4·96	

ANNUAL FORM No. XII.—DEATHS *registered from* PLAGUE *in*

No.	Districts.	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
		Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	5	1,478	17	74	117	42	5	2	...
2	West Khándesh ...	10	1	1,242	5	36	18	3	...	...	...
3	Násik ...	19	5	1,667	15	...	...	...	...	...	...
4	Thána ...	15	9	1,546	19	20	18	28	19	10	3
5	Bombay Suburban ...	4	3	86	11	...	13	20	31	12	2
6	Kolába ...	14	3	1,482	8	3	18	11	11	8	3
7	City of Bombay ...	1	1	1	1	4	20	132	342	185	34
	Central Registration District.										
8	Ahmednagar ...	15	1	1,346	1	...	...	...	...	...	...
9	Poona ...	20	5	1,157	4	1	1	2	2	2	...
10	Sholápur ...	10	...	718	...	...	...	...	...	...	...
11	Sátára ...	19	11	1,342	51	120	68	67	3	...	...
12	Ratnágiri ...	15	1	1,305	1	...	...	...	1	...	...
	Southern Registration District.										
13	Belgaum ...	15	6	1,069	17	22	13	4	5	8	4
14	Dhárwár ...	18	16	1,277	117	319	156	48	13	24	29
15	Bijápur ...	13	2	1,128	2	7	1	...	...	...	...
16	Kánara ...	16	1	1,264	5	10	3	4	...	...	...
	Gujarát Registration District.										
17	Surat ...	12	7	782	7	...	1	1	5	1	...
18	Broach ...	9	...	404	...	...	...	...	...	...	...
19	Kaira ...	15	1	579	1	...	...	...	2	...	...
20	Panch Mahals ...	7	...	668	...	...	...	...	...	...	...
21	Ahmedabad ...	13	1	871	1	...	...	...	3	...	...
	Sind Registration District.										
22	Karáchi ...	16	1	793	1	...	...	2	27	9	6
23	Hyderabad ...	11	...	862	...	...	...	...	...	...	...
24	Thar and Párkar ...	13	...	904	...	...	...	...	...	...	...
25	Nawábshah ...	9	1	731	1	...	...	...	1	...	...
26	Lárkána ...	15	...	763	...	...	...	...	...	...	...
27	Sukkur ...	12	...	671	...	...	...	...	...	...	...
28	Upper Sind Frontier ...	6	...	410	...	...	...	...	...	...	...
	Total for the Presidency ...	364	81	26,546	285	616	456	364	475	261	81

the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1921.*

—	5						6			7			8	9
							TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.				
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
...	...	50	270	191	117	332	486	868	·70	·92	·81	5·04	1
...	...	...	1	...	...	35	23	58	·11	·08	·10	7·69	2
20	75	55	56	25	12	137	106	243	·33	·26	·29	4·41	3
1	20	31	12	7	3	93	74	172	·25	·20	·23	·65	4
2	4	5	...	2	2	50	43	93	·57	·67	·61		
1	2	...	...	...	3	32	28	60	·11	·10	·11	·45	6
18	22	22	11	2	6	595	212	807	·79	·53	·70	1·20	7
...	...	...	...	7	...	1	6	7	·00	·02	·01	2·78	8
...	1	2	...	...	...	9	2	11	·02	·00	·01	4·76	9
...	...	...	...	...	...	...	...	...	...	...	...	7·94	10
...	22	84	225	156	55	370	430	800	·72	·84	·78	10·10	11
...	...	...	...	...	...	1	...	1	·00	...	·00	·26	12
8	6	49	43	15	25	88	114	202	·18	·25	·21	5·19	13
60	84	78	161	122	156	581	674	1,255	1·10	1·33	1·21	5·67	14
...	...	...	...	...	...	4	4	8	·01	·01	·01	4·50	15
...	...	...	...	...	1	8	10	18	·04	·05	·05	·30	16
...	...	...	...	1	...		3	9	·02	·01	·01	1·95	17
...	...	...	...	...	...	...	...	...	...	...	...	2·12	18
...	...	...	...	...	...	2	...	2	·01	...	·00	5·27	19
...	...	...	...	...	...	...	...	...	...	...	...	1·54	20
...	...	...	...	...	...	3	...	3	·01	...	·00	5·72	21
1	...	3	1	1	4	3	21	54	·11	·09	·10	1·46	22
...	...	...	...	...	...	...	...	...	...	...	...	1·16	23
...	...	...	...	...	...	...	...	...	...	...	...	·01	24
...	...	...	...	...	...	1	...	1	·00	...	·00	·05	25
...	...	...	...	...	...	...	...	...	...	...	...	·06	26
...	...	...	...	...	...	...	...	...	...	...	...	·64	27
...	...	...	...	...	...	...	...	...	...	...	...	·10	28
111	236	379	780	529	384	2,436	2,236	4,672	·24	·25	·24	3·53	

BOMBAY: PRINTED AT THE GOVERNMENT CENTRAL PRESS

ANNUAL SANITARY REPORT, 1922.

(Maximum limit, 25 pages.)

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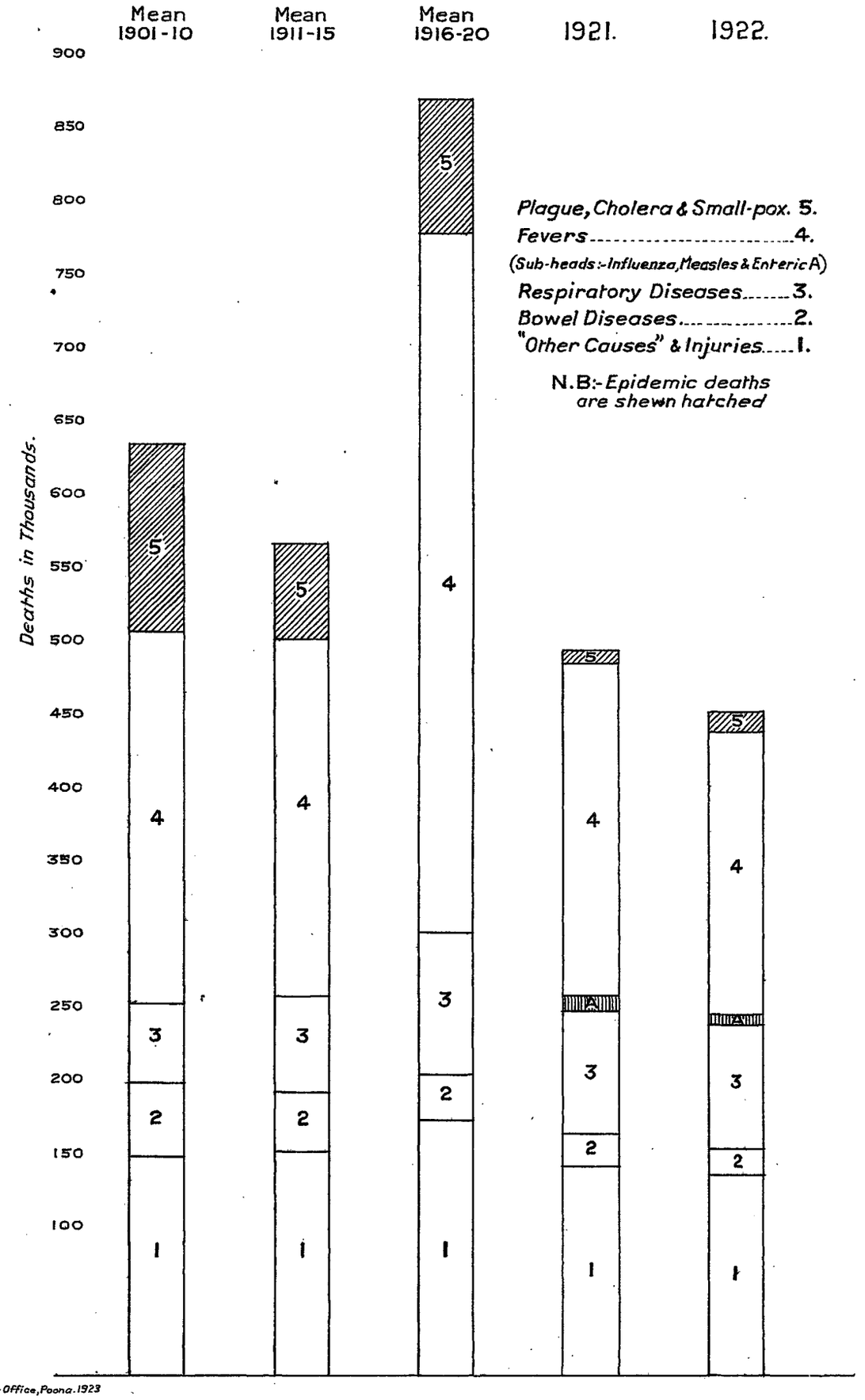
TOTAL DEATHS AND DEATHS BY CAUSES IN 1922. COMPARED WITH 1921 AND PREVIOUS YEARS.



Govt. Photozinco: Office, Poona. 1923

ANNUAL SANITARY REPORT FOR 1922.

SECTIONS I TO IV—No remarks.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

The birth and death ratios are calculated on the Census population of 1921.

2. *Europeans.*—During the year among 19,247 Europeans 316 births and 268 deaths were recorded against 393 and 397 in 1921. The calculated birth-rate was 16·42 per mille against 20·42 in 1921 and the death-rate 13·42 against 20·62. Of the 316 births, 164 were males and 152 females against 208 and 185 in 1921 while 166 male and 102 female deaths were recorded against 264 and 133 in 1921.

Of the 268 deaths only four were due to Small-pox as compared with 12 in the year 1921. There were no deaths from Cholera or Plague. Thirty-seven deaths were ascribed to "Fevers" and 53 to "Respiratory Diseases" compared with 83 and 59 respectively in 1921, while 132 were due to "Other Causes" against 166 for the previous year.

The decline in the number of deaths occurred chiefly in Bombay City where 130 male and 71 female deaths were recorded against 193 and 100 respectively in 1921. Fever caused 32 deaths, Dysentery 23, Respiratory Diseases 41, injuries 9 and Other Causes 95 against 65, 43, 48, 15 and 108, while for the epidemic diseases—Cholera, Small-pox and Plague—the figures were nil, one, and nil, as against 3, 10 and 1 respectively in the previous year.

3. *Anglo-Indians.*—In a population of 10,221, 182 births and 211 deaths were registered against 171 and 241 in 1921. The birth and death ratios per mille were 17·81 and 20·64 respectively compared with 16·73 and 23·58 in 1921.

Of these births 82 were males and 100 females against 92 and 79, while of the deaths, 122 were among males and 89 among females against 154 and 87 in the previous year. Of the 211 deaths 29 were due to Fever, 18 to Dysentery, 52 to Respiratory Diseases, 5 to Injuries and 101 to Other Causes against 40, 28, 66, 4 and 101 respectively, while those due to reported epidemic diseases were Cholera 2, Small-pox 1 and Plague 3 against 3, 2 and 3 respectively in 1921.

There was a marked decline in deaths in Bombay City where 97 male and 74 female deaths were recorded against 122 and 63 in 1921. Fever caused 24 deaths, Dysentery 17, Respiratory Diseases 48, and Other Causes 76 against 26, 26, 51 and 73 respectively in the previous year.

4. There are now including Bombay City, 28 Collectorates in the Presidency comprising 251 Rural (Taluka or Mahal), 105 Town and 9 Cantonment Registration Circles, from all of which statistical returns are received. Returns are also received from 7 Cantonments in Native States. The increase in the number of Cantonment circles this year is due to the inclusion for the first time of Santa Cruz Cantonment in Bombay Suburban District.

Indian Population.—In 1921 the population of the Presidency including Sind was 19,165,614. The population of the Rural circles was 15,432,717; of the Town circles 3,652,160; of the Cantonments in British territory 80,737; and of the Cantonments in Native States 111,391 persons.

BIRTHS.

5. 620,770 births were registered shewing a decrease of 3,870 over the figure for 1921 and 40,984 less than the decennial mean. The number of births recorded annually since 1911 is as follows:—

1901—1910 mean	617,736	1917	699,823
1911	705,090	1918	619,224
1912	684,890	1919	546,460
1913	684,803	1920	593,175
1914	733,076	1911—1920 mean	669,799
1915	726,780	1921	624,640
1916	704,602	1922	620,770

The decrease as compared with the previous year is shared by three Registration Districts—Sind 7,947, Guzerat 3,779 and Western 2,696, while the Central and Southern Districts showed an increase over the previous year of 6,713 and 2,517 respectively.

6. The birth-rate for the year for the Presidency including Sind was 32·39 against 32·59 during the previous year. For the Presidency proper excluding Bombay City and Sind the birth-rate was 36·18 against 36·00 and for the Province of Sind 20·46 against 22·90 in 1921. The rates recorded in other parts of India compared with the birth-rate in England and Wales are given below :—

England and Wales	.. ..	20·6	Bihar and Orissa	35·03
Bengal	.. ..	27·4	United Provinces	32·17
Madras	.. ..	30·0	Punjab	39·31
Assam	.. ..	28·43	Central Provinces	35·80
Burma	.. ..	29·69		

In the Presidency proper excluding both Bombay City and Sind the birth-rate for rural areas was 37·48 and for urban areas 28·33 against 37·29 and 28·10 respectively in 1921.

7. Over Rural areas the birth-rate varied from 52·38 for Man Taluka in Satara District to as low a figure as 14·07 for Poona City Taluka. Of the 190 talukas, Pethas and Mahals 134 or 71 per cent. returned a birth-rate above 35, while 44 returned rates between 35 and 30. The following 12 talukas, comprising 6 per cent. of the total, returned birth-rates below 30 per mille of population :—

Bassein 27·50 and North Salsette 29·57 in Thana District; South Salsette 15·91 in Bombay Suburban District; Kopergaon 29·82 in Ahmednagar; Mawal 26·87 and Poona City 14·07 in Poona; Malcolmpeth 23·71 in Satara; Gogo 27·71, Sanand 28·59, Viramgaon 29·67 and Modasa 29·45 in Ahmedabad; and Supa 27·15 in Kanara.

The Assistant Director of Public Health, Sind, attributes the fall in the birth-rate in that Registration District to two causes: (1) the recording agency, *viz.*, Revenue Tappedars had less time at their disposal for registration work during the year under report than in the preceding year owing to increased Revenue duties and (2) a large ingress of people from Cutch, Makran and Las-Beyla in the preceding year inflated the birth-rate temporarily during that year. They returned to their own countries early in 1922.

Broach, Panch Mahals and Ahmedabad show a decrease by 2·09, 3·48 and 3·48. These three districts also recorded the lowest birth ratios in Guzerat for the last nine years.

8. Out of the 85 towns 9 returned birth-rates over 40, *viz.*, Borsad (49·04), Nasirabad (46·93), Guledgud (45·66), Umreth (42·78), Dholka (42·52), Broach (41·92), Jambusar (41·23), Gokak (40·34) and Parola (40·24).

Thirteen towns recorded birth-rates of between 35 and 40 and 52 recorded birth-rates between 35 and 20 per 1,000. In the remaining 11 towns the recorded birth-rates were under 20 as follows :—Alibag (18·85), Karad (17·33), Amalner (16·58), Igatpuri (16·24), Satara (15·54), Poona Suburban (15·46), Gokarn (14·76), Uran (14·51), Kurla (13·35), Manmad (13·15) and Poona City (10·67), all of which with the exception of Manmad and Igatpuri appeared in this category last year also. Registration of births in these towns leaves much to be desired particularly so in Poona City where only 1,421 births were registered while the deaths totalled 5,703. The remarks made in last year's report regarding registration in Poona City still hold good.

In all these towns, municipalities are responsible for the Public Health administration and the figures shew that attention given to registration of births is far from what it should be.

9. 20,155 births were registered in Bombay City against 18,833 in 1921; the birth-rate being 17·54 against 16·39 in the preceding year.

10. In Sind 66,714 births were recorded, a reduction of 7,947 in the number for 1921. The birth-rate for the year was 20·46 against 22·90 in 1921.

In the Presidency proper the rural exceeds the urban birth-rate. In Sind the reverse is again the case, the urban rate being 31·22 and the rural 18·53 per thousand of population. Of the 19 urban circles in Sind 3 returned birth-rates of over 35, *viz.*, Hyderabad (42·30), Ratodero (36·48) and Karachi (35·03); only one

circle returned a birth-rate between 30 and 35, *viz.*, Rohri (30·15). Six towns recorded a birth-rate between 20 and 30. For the rest the lowest figures were recorded in Jacobabad (19·10), Tatta (18·30), Tando Adam (17·51), Nawabshah (16·10), Sehwan (16·05), Umarkot (15·48), Kambar (14·58), Kotri (11·90) and Mirpurkhas (10·41).

Of the 60 Talukas and Mahals in Sind, only 4 returned birth-rates above 30, *viz.*, Sukkur (33·34), Kakar (30·49), Dadu (30·48) and Diplo (30·07). Twenty-one returned rates between 20 and 30 and the rates for the remaining 35, or 58 per cent. of the total, were all below 20 per mille of population. Of these the following showed rates of under 14 per mille, *viz.*, Kambar (13·50) in Larkana District; Samoro (13·43), Khipro (13·36) and Umarkot (8·84) in Thar and Parkar; Guni (13·09), Tando Bago (12·10) and Badin (8·16) in Hyderabad, while 11 out of 12 rural circles in Karachi District, *viz.*, Karachi, Kohistan, Tatta, Mirpur Sakro, Ghorabari, Mirpur Bathoro, Sujawal, Jati and Shaha-Bandar recorded excessively low birth-rates between 6 and 10.

11. *Births in Cantonments.*—Karachi (34·02), Nagar Cantonment (21·28) and Kirkee (16·77) again show the highest rates. In the remaining Cantonments the birth-rate was less than 10, the lowest (2·13) being recorded in Santa Cruz.

12. Out of 620,770 births, 323,631 were males and 297,139 females equal to a ratio of 16·59 and 15·50, as compared to males 325,751, females 298,889, and a ratio of 17·09 and 15·59 respectively in 1921. The percentage of male to female births is 108·91. The previous year's figure was 108·99 while for 1920 it reached 109·08.

During the year under report the proportion of males to every hundred females born varied from 132·97 for Nawabshah District to 102·83 for Broach District and the excess of births over deaths per 1,000 of population varied from 12·43 for West Khandesh to ·02 for Bombay Suburban, while in Bombay City the reverse was the case, *viz.*, excess of death-rate over birth-rate by 14·60.

13. *Still-births.*—10,809 still births were registered or 1·74 for every hundred live births. The corresponding figures for 1921 were 10,125 and 1·62 respectively. The percentage of still-births to live births recorded varied from ·16 for Satara District to 9·43 for the City of Bombay. For other areas Kanara (4·96), Dharwar (3·24), Bijapur (2·88), Kolaba (2·83), Surat (2·45), Belgaum (2·22) and Karachi (2·00) show the highest percentages.

Deaths.

14. A remarkably low mortality was recorded during the year under report, the lowest in fact since 1890. The total number of deaths registered was 452,581 as compared to 498,350 in 1921, 712,135 the decennial mean, and 612,329 the mean for the pre-influenza year quinquennium. Comparison is shown in graphic form at the beginning of this section. The totals for other years of the decade are included in the following table :—

1901—1910 mean	.. ..	639,483	
1911	.. ..	555,312	
1912	.. ..	683,210	
1913	.. ..	521,539	
1914	.. ..	577,504	
1915	.. ..	511,613	
1911 to 1915 mean	.. ..	539,836	
1916	.. ..	652,584	
1917	.. ..	798,406	
1918	.. ..	1,724,674	
1919	.. ..	637,170	
1920	.. ..	516,296	
1911 to 1920 mean	.. ..	719,331	
1921	.. ..	498,350	
1922	.. ..	452,581	

15. The recorded death-rate for the whole Presidency works out to 23·61. The death-rate in 1921 was 26·00, the decennial mean being 37·16.

For other parts of India, the death-rates recorded are as follows :—

Madras	.. .. ..	21·0	
Bengal	.. .. ..	25·2	
Assam	.. .. ..	26·85	
Burma	.. .. ..	22·23	
Bihar and Orissa	.. ..	24·13	
Punjab	.. ..	22·07	
United Provinces	.. ..	25·01	
Central Provinces	.. ..	29·31	

The death-rates for England and Wales and London were 12·9 and 13·4 (provisional figures) respectively.

Excluding Bombay City and Sind the death-rate for the Presidency was 23·81 against 28·04 in 1921. The death-rates for Rural and Urban areas in the Presidency as a whole were 22·49 and 28·26 against 23·89 and 34·84 respectively in 1921.

Of the districts the highest death-rate (30·48) was returned by Nasik and the lowest (15·32) by Panch Mahals.

16. Of 191 Talukas, Pethas and Mahals, only 4 show death-rates exceeding 40, *viz.*, Mundgod (41·04) in Kanara; Gogo (42·49) in Ahmedabad; Dindori (41·17) in Nasik; and Ambarnath (41·30) in Bombay Suburban District. Of the remainder 4 returned death-rates over 35, *viz.*, Dharwar (35·63); Yellapur (36·08) in Kanara; Nandgaon (37·82) in Nasik; and Barsi (36·95) in Sholapur District. Thirty show death-rates between 30 and 35, *viz.*, Belgaum; Kalghatgi and Hangal in Dharwar; Kumtha, Honawar, Sirsi and Siddapur in Kanara; Ankleshwar and Hansot in Broach; Erandol in East Khandesh; Sinnar, Niphad, Chandor, Yeola, Malegaon, Baglan and Kalwan in Nasik; Wada and Mokhada in Thana; Uran and Khalapur in Kolaba; Parner, Shrigonda, Karjat, Newasa, Sangamner, Sheogaon and Pathardi in Ahmednagar; Mawal in Poona; and Khandala Peta in Satara; while the remaining show death-rates below 30.

17. For Urban areas death-rates varied between 44·35 for Belgaum town and 6·40 for Karad. Out of 85 Urban Registration circles 4 returned death-rates over 40, *viz.*, Belgaum (44·35), Pandharpur (43·55), Dharwar (43·03) and Poona City (42·84).

18. *Corrected death-rates.*—The following table gives the death-rates corrected in accordance with age and sex distribution for the Presidency and for the six towns for which such correction is possible :—

—	Standard death-rate.	Factor for correction.	Recorded death-rate.	Corrected death-rate.
Presidency (excluding Bombay City and Sind) ..	39·8	1	23·81	23·81
Bombay City	28·6	1·39	32·13	44·66
Ahmedabad	37·6	1·06	33·75	35·77
Karachi	38·5	1·03	32·31	33·28
Poona	37·0	1·08	42·84	46·27
Sholapur	39·4	1·01	31·23	31·54
Surat	39·0	1·02	31·90	32·54

19. *Bombay City.*—Population 1,148,815. The registered deaths number 36,925 equal to a death-rate of 32·13 as against 46·25 in 1921. The number of infantile deaths was 8,166 or a ratio of 405·16 per 1,000 births, as against 12,658 deaths and a rate of 672·12 in 1921. The chief causes of death shown in the returns are Plague, Fevers, Dysentery and Diarrhœa, and Respiratory Diseases.

20. *Ahmedabad City.*—Population 270,899. The registered deaths amounted to 9,134 equal to a death-rate of 33·75. The number of infantile deaths was 2,915 equal to a ratio of 299·04 per 1,000 births. The total number of births registered was 9,748 equal to a birth-rate of 36·02. The chief causes of death shown in the returns are Fevers and Respiratory Diseases.

21. *Poona City.*—Population 133,122. The total deaths registerd amount to 5,703 equal to a death-rate of 42·84 as compared with 6,340 and a ratio of 47·61 for 1921. The chief causes of death shown in the returns were Small-pox, Plague, Fevers and Respiratory Diseases. The infantile death-rate per 1,000 births amounted to 1,064·74 against 876·29 in the previous year.

22. *Karachi City.*—Population 199,014. The total deaths recorded were 6,430 equal to a death-rate of 32·31 while the quinquennial mean was 50·71 against 6,816 and 34·24 respectively in 1921. The chief causes of death shown in the returns are Small-pox, Plague, Fevers and Respiratory Diseases. During the year under review 6,972 births were registered equal to a birth-rate of 35·03 as compared with 7,852 births or a birth-rate of 39·45 in 1921. The infantile deaths numbered 1,757 corresponding to a ratio of 252·01 per 1,000 registered births as compared with 2,122 or a ratio of 270·25.

23. *Surat City.*—Population 117,428. The total deaths recorded were 3,746 against 3,384 in the preceding year. The corresponding death-ratios per 1,000 of population were 31·90 against 28·82. The chief causes of death shown in the returns were Fevers and Respiratory Diseases. 3,126 births were registered equal to a birth-rate of 26·62 as compared with 2,870 or a birth-rate of 24·44. The infantile deaths numbered 1,252 corresponding to a ratio of 400·51 per 1,000 births registered as compared with 950 and 331·01 respectively in 1921.

24. *Sholapur City.*—Population 119,347. The death-rate was 31·23, the total deaths recorded being 3,727 as against 5,296 in the year preceding. Fever is the chief cause of death shown in the returns. The birth-rate was 36·40 per mille, 4,344 births being registered as compared with 3,317 in 1921. The infantile deaths numbered 1,012 corresponding to a ratio of 232·97 as compared with 1,316 and 396·74 respectively in 1921.

25. *Death-rate in Sind.*—The death-rate for Sind was 12·42 against 15·72 in 1921. The excess in the urban rate (24·71) over the rural (10·21) is very marked as in previous years, and may be attributed in part to faulty registration in the rural areas. The urban death-rate ranged between 6·85 for Nawabshah and 32·21 for Karachi.

26. *Death-rate in Cantonments.*—The lowest death-rate recorded was 1·49 in Santa Cruz Cantonment, while Kirkee Cantonment headed the list with a rate of 37·67, Respiratory Diseases being responsible for 126 deaths, equal to a ratio of 15·76 per mille.

27. *Births* versus *Deaths.*—Over the Presidency as a whole births exceeded deaths by 168,189 (equal to a "natural increase" of ·88 on the population) compared with an excess of 126,290 in 1921. This increase is due to the fall in the death-rate, and not to any actual increase in the number of births. In the Presidency alone excluding Bombay City, the percentage of increase amounts to 1·01. For Sind the figure is ·80. In Bombay City, on the other hand, deaths exceeded births by 16,770 or 1·46 per cent. of the City's population. Futher details are given in columns 6 and 9 of the Annual Form No. II.

28. *Mortality according to Sex.*—238,303 male and 214,278 female deaths were recorded giving a death-ratio per thousand of each sex of 23·71 and 23·50 respectively against 26·26 and 25·72 for 1921. For every 100 females 111·21 males died as compared with 112·53 in 1921. In Sind the ratio of male to female deaths during the year under report was 125·25 to 100.

Infant Mortality.

29. There were 104,971 deaths among infants under twelve months corresponding to a ratio of 169·10 per 1,000 registered births against 178·11 in 1921. This is the lowest number recorded during the last 20 years. The male and female rates were 176·53 and 161·01 respectively as compared with 184·90 and 170·71 in the previous year. The above facts are shown in the following table :—

Infant mortality 1922, compared with previous years.

Year.	Deaths under 12 months.			Births registered.			Infant death ratio per 1,000 births.			Infant deaths per 100 of total deaths.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
1922 ..	57,130	47,841	104,971	323,631	297,139	620,770	176·53	161·01	169·10	23·19
1921 ..	60,231	51,023	111,254	325,751	298,889	624,640	184·90	170·71	178·11	22·32
1920 ..	59,236	49,440	108,676	309,468	283,712	593,175	191·42	174·26	183·21	19·36
1919 ..	58,950	51,398	110,348	285,195	261,265	546,460	206·70	196·73	201·93	17·32
1918 ..	94,553	83,124	177,677	322,546	296,678	619,224	293·14	280·17	286·93	10·32
1917 ..	79,984	71,649	151,633	363,460	336,362	699,822	220·06	213·01	216·67	18·99
Average for 1917 to 1921 ..	70,591	61,327	131,918	321,283	295,381	616,664	219·24	206·98	213·37	17·66

Of the 104,971 infants who died, 43,366 were one month old or less (24,816 under and 18,550 over one week); 35,567 were over one month but not exceeding six months, while 26,038 were over six months and not exceeding twelve months. The percentage of the total infant mortality under each of these three sub-groups works out to 41·3, 33·9 and 24·8 respectively. The details of the average hundred infant deaths in each Registration District will be seen in the following table:—

Districts.	Infantile deaths		Not exceeding one month.	1—6 months.	6—12 months.
	in every 100 total deaths.	per 1,000 births.			
Western Registration District	23·87	174·65	41·1	36·8	22·1
Central Registration District	22·42	154·60	39·7	34·3	26·0
Southern Registration District	20·84	145·27	45·1	34·3	20·6
Guzerat Registration District	25·38	175·05	40·1	33·4	26·5
Sind Registration District	25·55	156·32	43·2	31·2	25·6
Bombay City	22·12	405·16	39·5	27·1	33·4
Presidency	23·19	169·10	41·3	33·9	24·8

Throughout the Presidency, mortality amongst infants is greatest in the first month of life.

30. The following is a brief extract from the report on infant mortality by the Executive Health Officer, Bombay Municipality:—

"*Bombay City.*—The number of deaths among infants under one year of age was 8,236 being 4,515 less than in 1921, 3,540 less than the quinquennial average and 1,605 less than the average of 1912—1921.

The percentage of infant mortality to the total mortality at all ages was 22·08 against 23·78 in 1921 and 23·77 in 1920. The ratio per 1,000 of live births registered was 403 against 667 in the antecedent year and 480 the decennial average.

The infant population, or the number of infant lives at risk during the year, is usually accepted as being represented with sufficient accuracy by the number of births registered during the year under consideration. In Bombay the minimum estimate of the number of births escaping registration amounts to 2,000, and the number of infants born elsewhere and brought to reside in the City during the remainder of their infancy has been computed as amounting to 6,109—whilst those among these outborn infants who are born of mothers coming to Bombay for the first time cannot be included in casting the birth-rate, all can be legitimately included in computing the number of infant lives at risk in the City during the year.

The only fallacy involved in this calculation arises from the fact that no infant is likely to be brought into the City much before the age of one month, whilst some may not be brought till they have attained the age of 10 or 11 months. Thus the lives of none of these 6,000 infants are at risk for more than 11 months, whilst the lives of some are at risk for less than eight weeks. On the other hand, the number of unregistered births is probably under-estimated and a figure in the neighbourhood of 300 may be taken as representing the actual maximum mortality with a considerably closer approximation to the true state of affairs than the rate of 403 cast on registered births alone.

The calculated rate could be further diminished by increasing the estimate of the number of births escaping registration. A limit is, however, set to progress in this direction by the rate at which the number of deaths of the unregistered falls in the third and fourth weeks of life and again in the age period 1—12 months. In 1923 it is hoped to throw further light on this question by recording the ages at death month by month of the registered, unregistered and outborn.

Causes of death.—It will be seen that 5,835 or nearly 71 per cent. of the total deaths in infants were due to diseases of the Respiratory System, Infantile Debility and Premature Birth against 70 per cent. (8,902) in 1921. Diarrhœa and Enteritis caused 657 deaths, Malaria, Ague and Remittent Fevers 105 deaths and Convulsions 1,086 deaths. The deaths from Small-pox and Measles numbered 8 and 6 respectively.

Quinquennial Averages.—Compared with the averages of the preceding five years, Small-pox shows a decrease of 111, Measles of 117, the group Ague, Remittent Fever and Fever not defined of 191, Dysentery of 31 and Diseases of the Respiratory System of 2,012; on the other

hand Malaria shews an increase of nine, Diarrhœa and Enteritis of 55 and Infantile Debility and premature births of 80 deaths. The appreciable decline in the number of deaths from Diseases of the Respiratory System has been due to the fact that Influenza was in a mild form during the year.

Of the total deaths among infants, 1,894 or 23 per cent. took place in the first week of life and 1,350 or 16 per cent. in the age period 1 to 4 weeks.

The mortality among infants who had not completed the first month of life was thus 3,244 or 39 per cent. of the total infant deaths. The number of deaths in the age-groups 1 to 6 months and 6 to 12 months was 2,240 and 2,752 being respectively 27 and 33 per cent. of the total infant mortality.

The salient features in the year's statistics are the magnitude of the role played by debility and prematurity in the causation of death from Respiratory Diseases during the remaining months of infancy.

The analysis of deaths from different causes in 1901—1921 shews that an excessive death-rate among infants does not occur except in conjunction with an excessive death-rate at all ages and that the fluctuations in infant mortality which corresponded in time and direction with those of the general death-rate were indirectly or directly due to plague in the first decade of the Century and to Influenza in 1918—1921. In the year under report, the total deaths at all ages fell from 53,609 in 1921 to 37,297 shewing a decrease of 30 per cent. whilst the deaths among infants under one year of age fell by 35 per cent. from 12,751 to 8,236. These declines were chiefly due to the absence of Influenza in an epidemic form and the consequent fall in the number of deaths from diseases of the Respiratory System."

From Tables illustrating the infantile death-rate in the different sections of the City and according to caste and number of rooms occupied the following items are extracted :—

" *Infant mortality amongst the principal castes are.*—Hindus of other Castes 386, Hindus low castes 436, Brahmins 576, Banias 353, Mussulmans 435, Indian Christians 478, Jews 267, Parsis 143, and Europeans 149 per 1,000 births registered.

Infant mortality by the number of Rooms occupied in 1922.

	Births.		Deaths in infants.		Infant mortality per 1,000 births registered.	
	Number.	Percentage.	Number.	Percentage.	1922.	1921.
Four or more rooms ..	273	1·33	82	0·99	300·3	133·3
Three rooms	351	1·71	148	1·79	421·6	191·4
Two rooms	973	4·75	424	5·14	435·7	321·9
One room and under ..	15,079	73·72	7,102	86·23	470·9	828·5
Road side	44	0·21	17	0·20	386·3	484·8
Hospitals	3,732	18·24	463	5·62	150·5	189·6
Total ..	20,452	100·00	8,236	100·00	402·7	666·7

The percentage of population occupying tenements of one room and under to the total number of occupants in all classes of tenements in the City by the Census of 1921 was 65·88. Of the 20,452 births registered in the year 15,079 or 73·72 per cent. occurred in families living alone in a single room or sharing it with others and the number of deaths in infants in this class of population was 7,102 or 86·23 per cent. of the total infant mortality. It will be observed from the statement that the rate of deaths among infants in single room tenements per 1,000 births in such tenements during the year was 470·9 against 828·5 in 1921 and that the proportion of deaths to births varies inversely as the number of rooms occupied by the parents.

Prevention of Infantile Mortality.

The work which is being done in Bombay for the reduction of infant mortality and the detailed summary is on the lines fully described in the report for the year 1920.

During the year the Municipal Nurses paid 59,408 visits to houses, chawls and huts, inquired into 4,434 cases of ordinary sickness, reported 266 cases of infectious diseases and 1,045 deaths in the female population of the City. They also attended on 1,259 confinements and verified the reports of the Birth Karkuns on 7,997 births.

Of the total number of 22,368 births (including 1,916 still-births) registered in the City during the year, 13,365 or 60 per cent. were verified by the Municipal Nurses against 61 per cent. in 1921 and 60 per cent. in 1920.

Among the cases wherein enquiries were made the proportion of births wholly unattended was 6 per cent. and that of confinements attended by unskilled women 60 as against 4 and 57 respectively in 1921.

The percentage of confinements attended by qualified midwives was 6·7 and that of confinements attended by Municipal midwives was 9·4; the percentage of children born in Hospitals (17·9) shewed a decrease of 6·5.

The percentage of children born in healthy condition increased from 63 in the previous year to 71 and that of children fed on breast fell from 66 in 1921 to 62 in 1922.

The percentage of children dying within 30 days of birth was 11·7 against 12 per cent. in 1921.

The percentage of mothers who left home for work leaving their children to the care of others shews an increase of 2·7 per cent.

The total number of women admitted in all the three Municipal Maternity Homes during the year was 1,784 against 1,635 in 1921. The number of cases confined in the three Homes was 1,627 against 1,444 in 1921.

Infant Milk Depôts.—As reported in the annual report for 1920 the two Milk Depôts supplied 21,358 seers of milk free or at a nominal price to children born in the Homes or under the supervision of the Municipal Nurses.

Voluntary Welfare Centres.—The Maternity and Child Welfare Scheme of the Infant Welfare Society has made much progress. At the end of the year the centres established numbered five. They propose to give (1) advice and instruction to mothers as to infant management, (2) Medical aid and advice to infants (3), Day Nurseries (Creches) and home visiting and (4) a staff of trained nurses for visiting the homes of infants."

31. *Deaths by Castes and Classes.*—Deaths by classes and by sex in each Collectorate are recorded in Annual Form No. V, Appendix IV.

32. *Deaths according to Causes.*—The following table shews the number of deaths in 1922 and the ratios per 1,000 of population arranged according to causes and contrasted with the figures for 1921 and with the mean for the preceding ten years :—

	1922.		1921.		Mean for ten years.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Cholera	2,768	·14	3,521	·18	19,059	·97
Small-pox	1,170	·06	1,771	·09	4,778	·24
Plague	8,379	·44	4,672	·24	46,817	2·39
Fever	197,888	10·33	226,100	11·80	362,889	18·55
Dysentery and Diarrhoea ..	21,118	1·10	26,799	1·40	36,330	1·86
Respiratory Diseases ..	82,682	4·31	93,336	4·87	83,812	4·29
Injuries	7,810	·41	7,888	·41	7,768	·40
Other Causes	130,766	6·82	134,263	7·01	155,181	7·94
Total ..	452,581	23·61	498,350	26·00	716,634	36·64

With the exception of Plague, there is a decrease under all headings.

33. Two charts are also attached shewing in graphic form the total deaths, and deaths according to causes for the year contrasted with corresponding figures for the previous year and the mean for 1901—1910, 1911—1915 and 1916—1920.

34. For comments on the causes of deaths *vide* Section VI.

35. *Cantonments in Native States.*—The total number of births in Cantonments which are situated in Native States during the year 1922 was 2,008 against 2,155 in 1921 giving a birth-rate of 18·03 per 1,000 of the population against 19·35 for the previous year. There were 2,657 deaths equal to a ratio of

23·85 per mille against 2,334 and a ratio of 20·94. The statistics are tabulated below :—

Statement showing the names of Cantonments with population and deaths from diseases for the year 1922.

	Population according to Census of 1921.	Area in square miles.	Average population per square mile.	Number of births.	Ratio of births per 1,000 of population.	Number of deaths: Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Disease
Aden Municipal Limits ..	44,000	70	629	1,005	22·84	..	68	..	530	369	..
Purely civil population of Cantonment ..	650	7·44	87·37	20	30·77	..	..	..	24	..	..
Baroda	2,934	1·09	2,934	51	17·38	..	..	..	20	2	..
Deesa	5,449	3	1,816	113	20·74	..	..	..	72	2	..
Mhow	31,734	6·5	4,882	176	4·60	..	2	..	133	..	..
Nasirabad	15,959	8	19,947	509	31·89	..	..	..	141	27	45
Neemuch	10,490	4·52	2,539	163	15·53	..	..	..	98	17	3
Rajkot	175	·50	350	1	5·71	..	..	..	..	..	..
Total ..	111,391	101·05	1003·3	2,008	18·03	..	70	..	1,023	417	48

	Number of deaths			Ratio of deaths 1,000 of population.							
	Injuries.	Other Causes.	All Causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	Other Causes	All Causes.
Aden Municipal Limits ..	19	760	1,746	..	1·54	..	12·05	8·39	..	·43	17·27	39·68
Purely civil population of Cantonment ..	..	7	31	..	..	..	36·92	..	..	..	10·77	47·69
Baroda	1	5	28	..	..	..	6·82	·68	..	·34	1·70	9·54
Deesa	2	15	96	..	..	..	14·13	·37	..	·37	2·75	17·62
Mhow	..	138	273	..	·06	..	4·19	..	..	..	4·35	8·60
Nasirabad	3	112	328	..	..	..	8·93	1·69	2·82	·19	7·02	20·55
Neemuch	..	34	152	..	..	..	9·34	1·62	·29	..	3·24	14·49
Rajkot	1	2	3	..	..	..	..	..	..	5·71	11·43	17·14
Total ..	26	1,073	2,657	..	·63	..	9·19	3·74	·43	·23	9·63	23·85

36. *Rainfall.*—The monsoon appeared on the west coast during the last two days of May. The onset though vigorous was short lived as the current weakened early in June. It recovered however about the second week of June and steadily spread inland ; but it was not until the third week that monsoon conditions became established in Guzerat. There, and in Kathiawar the whole precipitation during the month was confined to the last ten days. Excellent rainfall occurred in the Konkan while the Deccan and Karnatak areas also received a fair share. In Kathiawar on the other hand the fall was generally deficient.

July.—Rainfall, copious and well distributed, was received throughout the Konkan, in almost the whole of Guzerat and in the Western portions of the Deccan and Karnatak. Kathiawar received fair rain.

August.—The rains during the month varied from little or nothing to two-thirds of the average in all the divisions of the Presidency and in the Native States. The distribution of the rains was satisfactory.

September.—Adequate and well spread rain fell throughout the Konkan and Guzerat Districts, and in places adjoining the Western Ghats, and satisfied all requirements.

37. Prices of food grains were on the whole lower than those of the last year but varied in different localities. Whereas in Sholapur, Satara, Bijapur and

Dharwar Districts the rates of jowari were nearly halved, in Bombay, Kolaba and Ratnagiri Districts, there was no change in the rates for rice.

War allowances were granted to those who were entitled to this concession during the year under report.

Remarks on Charts, (*vide* paragraph 33.)

The monthly incidence of death in this Presidency is invariably at its lowest in June. The month of maximum incidence on the average is December with November, January and October next in order. The actual maximum in different years has fallen on each of those three but also in March and in August. For the year under report it has fallen in December.

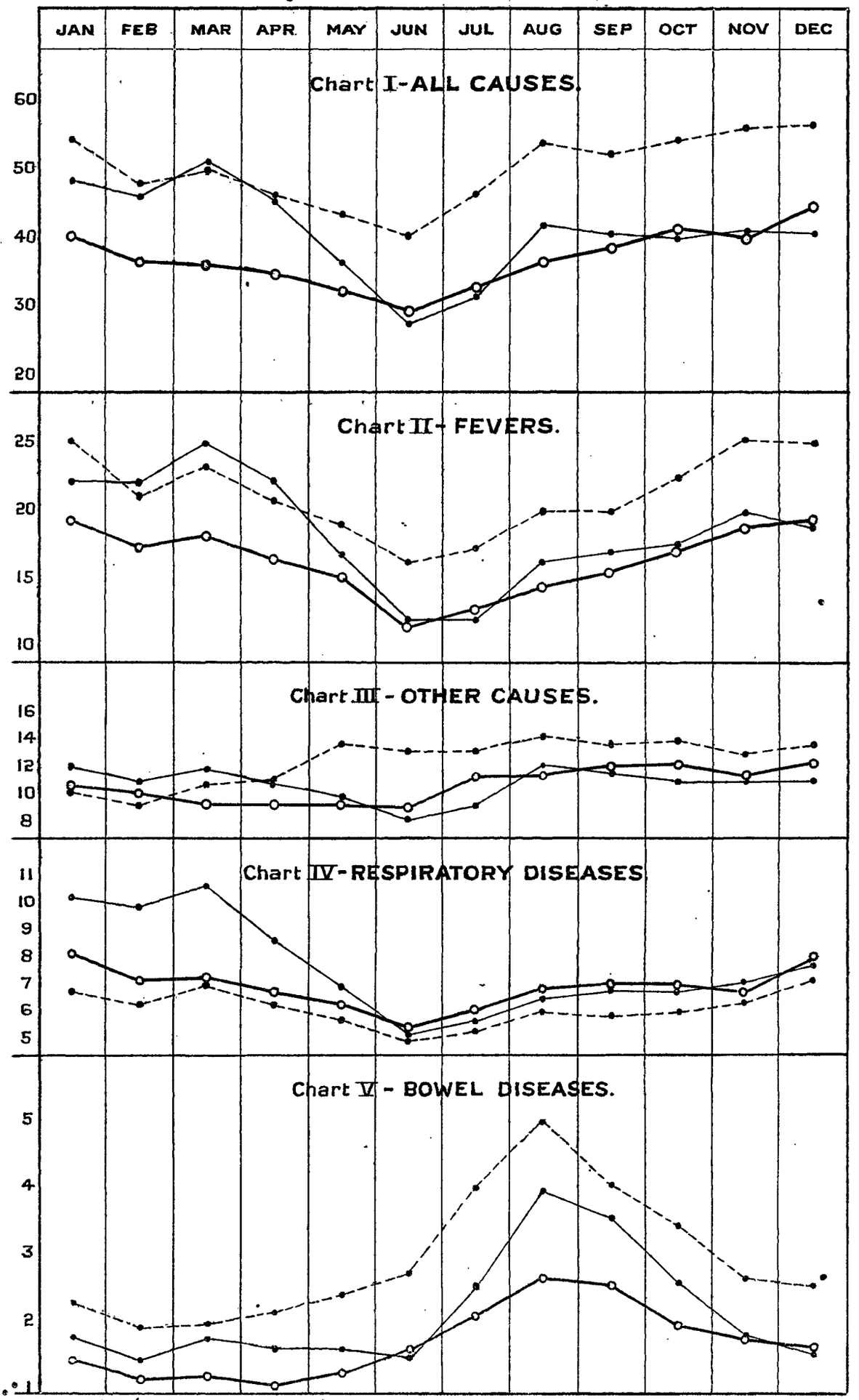
The curves of the chief (numerical) headings are in the main parallel to that of the curve of total death. Charts I to V show the monthly incidence of death for the year under report in contrast with 1921 and the average year of the inter-censal period preceding. In the graphs for average of total deaths, Fever and Respiratory diseases, 1918 has been left out in order to exclude influenza which would occlude legitimate comparison. For the remaining causes the graph average is the actual mean recorded for all years of the decennium.

The curves of death from the three chief epidemic diseases Charts VI, VII, VIII do not show the same parallelism with that of total deaths. In other words these diseases have less influence in controlling the total death-rate. The chief reasons are (1) the number of deaths from epidemics is, in comparison with remaining causes, very small (amounting to an average of only 1/13 of the total), (2) The seasons of maximum prevalence of each are different so that a combined curve for all three would be irregular shewing no great seasonal influence. It may be stated that the curve for Plague is really the result of two components of different character that for inland districts with its apex in October and for coastal districts, maximum in April.

MONTHLY INCIDENCE OF DEATHS FROM CHIEF CAUSES.

1922 o——o, 1921 •——•, PREVIOUS AVERAGE* •- - -•

Scale Figures represent deaths in thousands.



*1918 (Influenza Year.) *omitted in the average of Charts I. II. & IV.*

Govt Photozinco: Office, Poona, 1923.

SECTION VI.

HISTORY OF CHIEF DISEASES.

38. *General Remarks.*—As already stated the total death figures shew that the year 1922 was the healthiest since 1887. A fall in the actual number of deaths occurred under practically all the separate major headings of causes of death. Thus, comparing the figures with those of the preceding year, " Fevers " shew a reduction of 12 per cent. " Other Causes " 2·6 per cent.; " Respiratory Diseases " 11·4 per cent. and " Bowel Diseases " 21·20 per cent.; while the total deaths from Plague, Cholera, Influenza and Small-pox combined were approximately equal in the two years. Further comparison is shewn in the table in paragraph 32 and in the following paragraphs as well as in graphic form at the beginning of the Report.

FEVERS.

197,888 deaths (103,824 males and 94,064 females) the lowest figure recorded during the last 47 years were due to fevers against 226,100 in 1921 and a decennial mean of 362,889. The death-rate was 10·33 against 11·80 in 1921 and a quinquennial mean of 24·04.

The annual mortality attributed to fevers in previous years is given in the following table :—

Year.	Number of deaths.	Rate per mille.
1901/1910 mean	258,497	14·00
1911	223,027	11·38
1912	286,321	14·62
1913	246,319	12·58
1914	259,164	13·23
1915	224,797	11·49
1916	262,401	13·40
1917	298,919	15·26
1918	1,284,013	65·55
1919	274,759	14·03
1920	266,092	13·58
1911/1920 mean *	260,200	13·28
1921	226,100	11·80
1922	197,888	10·33

(*Influenza year 1918 excluded.)

40. Distribution of fever deaths is shewn in Annual Form No. IX.

Thana (16·72) and Kolaba (16·63) are again the Collectorates shewing the highest death-rates, though these figures are an improvement on those of 1921, *viz.*, 18·73 and 18·57 and of 1920 27·45 and 23·69, respectively. The other districts that recorded high rates are Nasik (14·63), East Khandesh (14·33), West Khandesh (13·82) and Sholapur (13·45).

The urban fever death-rate was 6·48 and the rural 11·25 against 8·96 and 12·48, respectively in 1921. The highest urban death-rates in the Presidency proper were recorded in Barsi (25·37), Yeola (23·50), Pandharpur (21·78), Ankleshwar (17·69), Sholapur (17·20), Panwel (16·70) and Dholka (14·86).

In Sind the highest " Fever " death-rates were recorded in Ratodero (19·40) and Ghariyasin (19·29).

The details of sub-headings of deaths from fever are as follows :—

41. *Malaria.*—33,674 deaths were recorded against 40,905 in 1921. The death-rate was 1·76 against 2·13 and the reduction is shared by the Central and Sind Registration District. Thus the figures are, for the Western Registration District, 131 ; Central 7,885 ; Southern 5,984 ; Guzerat 407 and Sind 18,818 ; as compared with 83 ; 9,084 ; 5,623 ; 341 and 25,279. Excluding Sind the malaria death-rate was 0·91 compared with 0·98 in the previous year. The urban and rural death-rates were 0·83 and 1·98, respectively against 0·94 and 2·42 in 1921. The highest urban death-rates in the Presidency proper were recorded in Jambusar (10·77), Lonawla (5·35), Sangamner (4·71), Kumta (3·50), Ilkal (2·28) and Poona City (2·15). In the Province of Sind the highest death-rates for urban areas were recorded in Ghariyasin (19·29), Rohri (13·27), Larkana (12·32), Mirpurkhas (10·58), Kambar (9·99), Kotri (8·60), Tando Adam (6·63), Sehwan (5·88), Hyderabad (5·33), Hala (4·52) and Umarkote (4·29).

The highest rural death-rates from Malaria were also recorded in Sind as the following list by districts shews:—Sukkur (8·28), Larkana (7·93), Upper Sind Frontier (7·07), Thar and Parkar (6·36), Karachi (5·99), Nawabshah (5·42), Hyderabad (3·16) and in the Presidency proper, Poona (4·76), Ahmednagar (4·59) and Kanara (4·30).

42. *Anti-Malarial Measures.*—No anti-malarial measures were carried out during the year, owing to paucity of funds. The services of Touring Medical Officers in Nawabshah and Sukkur in Sind Registration District and West Khandesh District of the Presidency proper were dispensed with after the middle of March 1922. The Municipalities of Jalgaon, Kaira, Nasik, Jacobabad, Athani, Chikodi and Bijapur endeavoured to keep their roads and *gutters* clean; pools and pits were filled in and rank vegetation removed.

1,987 lbs. of quinine against 2,949 lbs. in 1921 were sold or distributed free throughout the Presidency by District Local Boards, Municipalities and Post Offices.

The Collector of Kanara reports:—

"The experiment of quininization was tried in some of the Local Board Schools in the above ghat talukas. It appears from the reports that the experiment has had an excellent effect on the health of the pupils. There has been a marked reduction in the enlargement of the spleen in many cases. The scheme of free distribution has been received with great satisfaction by the public, who are usually convinced of the efficacy of the drug. A new scheme of special registers to watch the distribution has lately been introduced. The people have now been led to expect a free supply and it would be inadvisable to discontinue the practice."

While the Collector of Larkana states that:—

"The drug has grown popular particularly among the masses both as an effective preventive and a cure for malarial fever. If the proposal has not been sanctioned I would strongly urge the continuance of the free supply."

The Collectors of Bombay Suburban and Kaira, the Deputy Commissioner, Upper Sind Frontier and the District Local Board, Karachi, expressed similar views.

43. During the year Rs. 125,311 were spent on anti-malarial measures against 352,557 in 1921. Of this sum Rs. 3,804 came from Provincial, Rs. 112,256 from Municipal and Rs. 9,251 from District Local Board funds.

The chief items in Provincial expenditure were:—

(*a*) Rs. 3,305 grant to the Bombay City Municipality.

(*b*) Rs. 499 for filling in tanks, borrow pits, etc., in Nawapur.

The expenditure in Bombay City including the Government grant amounted to Rs. 72,444. Of this sum Rs. 37,563 were establishment charges, and Rs. 2,791 contingencies; Rs. 2,653 were spent on disinfectants; Rs. 6,473 on filling in wells or covering them with concrete covers, and other measures required for dealing with tanks, wells, etc., for the prevention of malaria; and Rs. 22,963 on providing new pattern iron storm water gratings.

The mofussil Municipalities spent Rs. 30,215 in filling up mosquito breeding grounds and borrow pits, the chief amounts being Rs. 17,832 by Ahmedabad Municipality, Rs. 8,697 by Karachi, Rs. 1,928 by Hyderabad and Rs. 1,099 by the Lonawla Municipality.

On oil and disinfectants for the treatment of mosquito breeding grounds a further sum of Rs. 4,491 was spent by the mofussil municipalities. The chief amounts Rs. 2,059, Rs. 846 and Rs. 811 under this head were spent by the Karachi and Ahmedabad Municipalities, and those in the Bombay Suburban District, respectively.

The Municipalities also spent Rs. 3,560 on the free distribution of quinine, the largest amounts being Rs. 988 and 824 by Ahmedabad and Broach Municipalities. Rs. 782 were expended on the quininization of school children.

The District Local Boards incurred a total expenditure of Rs. 9,251. Of this Rs. 8,709 were spent on the free distribution of quinine. No provision was made by Government for this purpose during the year; quinine tablets remaining over from the previous year's stock and worth about Rs. 10,000 were distributed

free to school children and the public generally mainly in the Province of Sind and the District of Kanara.

In February 1921, at the special request of the Collector of West Khandesh, the Assistant Director of Public Health, Western Registration District, undertook a malaria survey of Nawapur and several selected villages in the neighbourhood Government sanctioning a grant of Rs. 1,000 for anti-malarial measures during 1921-22. The Assistant Director of Public Health advised that all efforts should be concentrated on the Rangawali river as the principal breeding ground for mosquitoes. An anti-malaria plan of campaign was accordingly drawn up but, owing to financial stringency it had to be dropped.

44. *Quininization of school children.*—Quinine distribution was carried out in Hubli town of the Dharwar District, in Analgi, Taluka Bankapur and in Dambal, Mundergi Peta, Taluka Gadag.

45. *Enteric Fever.*—1,953 deaths were registered against 2,835 in 1921. In the Southern, Central, Guzerat, Western and Sind Registration Districts, the total deaths were 995 ; 308 ; 15 ; 1 ; and 525 as compared with 1,630 ; 352 ; 3 ; 2 ; and 718 respectively during 1921. 109 deaths were recorded in Bombay City against 130 in the preceding year.

The highest death-rates for urban areas were recorded in Gokak (1·60) and Wai (1·47).

The Assistant Director of Public Health, Southern Registration District, reports :—

"995 deaths were reported as due to enteric fever during 1922 ; of these 162 deaths were carefully investigated by a house to house visitation the history of the illness being obtained from the relatives of the deceased persons. It was found that only 32 deaths, *i.e.*, 19·14 per cent. were really due to enteric fever, the village officers having wrongly attributed 130 deaths to this disease. Steps have been taken to instruct the village officers."

46. *Measles.*—2,134 deaths were registered against 3,599 in 1921. In the Central, Western, Guzerat, Southern and Sind Registration Districts the total deaths were 492 ; 288 ; 223 ; 892 and 217 as compared with 1,129 ; 885 ; 834 ; 238 and 313 in the previous year. Only 22 deaths were recorded in Bombay City against 200 in 1921. Among other places Karachi reported 100 deaths, Shikarpur 89, Poona City 67, Ahmedabad 48 and Surat 36 against 126, 51, 202, 620 and 61 respectively in 1921.

The highest death-rates for urban areas were recorded in Shikarpur (1·61) and Alibag (1·19).

The Health Officer, Surat Municipality, has reported that "Measles" chiefly prevails among the ignorant and illiterate masses living in the congested slums of the town from which it spreads outwards to other quarters. Efforts were made to instruct the people in precautionary measures and to persuade them to take medicines, without much success.

47. *Relapsing Fever.*—Only 69 deaths were reported from this cause as compared with 110 in 1921. 56, or more than three-fourths of the total were reported from Bombay City against 57 in the year preceding. It is probable that ordinarily many cases of this disease, owing to its comparatively low case mortality, remain unrecognised. The distribution of deaths is shewn in Appendix IV (form VIa), *viz.*, 4 from Ahmednagar District, 2 from Ahmednagar Cantonment, 2 from Nasik Town, 4 from Poona City and 1 from Karachi town.

The Civil Surgeon, Ahmednagar, reported on 23rd March 1922 that relapsing fever was prevalent in the district for about a year, and epidemic for 3 months. Cases began to be reported from Jamkhed Taluka in early February.

The following were the admissions to the Civil Hospital :—

January 1922	..	..	..	12
February	..	..	..	10
March	..	..	..	6
			Total ..	28

A point of interest is that 80 or 90 per cent. of cases suffer from marked epistaxis and this should be of value in distinguishing the disease from Influenza.

The Agency Surgeon, Kathiawar, reported that relapsing fever broke out on 29th May in Datia State (Kathiawar Agency). The Sub-Assistant Surgeon saw 9 cases which showed high fever with pain in the limbs and hepatic region and one or more relapses.

The Assistant Director of Public Health, Western Registration District, reports that Kamathwada village of Nasik Taluka returned 7 cases and 3 deaths from 9th July to 10th August and 2 cases from 13th to 18th August. 46 cases and 6 deaths were reported to have occurred in Rajana village, Taluka Sindkheda, District West Khandesh.

The Civil Surgeon, Satara, reports that "4 deaths were reported to have occurred in a family residing in Satara City. Two relatives were admitted into the Ranchatri Hospital where one died 6 hours after admission. The other recovered. Two female attendants on these patients also developed fever". The blood smears examined microscopically shewed spirillum obermeyeri.

48. *Kala-Azar.*—Only one death was reported (from Godhra town) against *nil* in the preceding year.

Influenza.

49. Influenza in a very mild form prevailed throughout the Presidency from January to May. The total number of deaths recorded for the year was 1,222 against 3,679 in 1921 and 16,690 (in 1920), the corresponding death-rates per mille being 0·06, 0·19 and 0·85. Pandemic Influenza took a heavy toll of life in 1918 since when its incidence has declined in the Presidency as will be seen from the following table :—

Year.	Number of deaths.
1918	1,041,481 (estimated).
1919	39,786 (estimated).
1920	16,690
1921	3,679

50. Among the Districts, Karachi reported the highest death-rate (·15). Other death-rates were as follows :—Ahmednagar (·12), East Khandesh (·11), Sholapur (·09) and Sukkur (·08).

51. In Western Registration District, 730 attacks and 219 deaths were recorded as due to influenza. East Khandesh returned 217 cases of which 119 proved fatal. Nasik and Thana Districts reported 51 and 38 deaths equal to a death-rate of ·05 and ·06 respectively. West Khandesh and Kolaba escaped very lightly. Death-rates in Nasik, Dhulia and Bhusawal towns were ·12, ·07 and ·04 respectively.

The Assistant Director of Public Health, Western Registration District, reports :—

"The Port Health Officer, Bombay, intimated on 27th March 1922 the names and addresses of persons who disembarked on 26th idem in Bombay from a ship infected with Influenza."

The Mamlatdars of the talukas concerned were asked to take necessary action to prevent the spread of the epidemic, but failed, with one exception, to trace the individuals concerned. No outbreak of influenza resulted so far as could be ascertained.

52. In the Central Registration District, Influenza caused 218 deaths against 776 in 1921. The percentage of male to female deaths was 122·33. In Ahmednagar District 90 deaths were recorded of which 47 occurred in 7 villages of the Sheogaon Taluka. Poona District contributed 25 deaths against 57 in 1921, the death-rate being ·02. Two deaths were reported to have occurred at Kedgaon Mukti Mission; while out of 75 cases 7 deaths were reported from Kedgaon village in Dhond Peta. There were 4 attacks and 4 deaths in Poona City during the year. In Sholapur District 65 deaths occurred of which 15 were recorded in Pandharpur town. Ratnagiri and Satara Districts reported 22 and 16 deaths respectively. In the month of April, Malcolmpeth reported 63 cases and 2 deaths while in the month of September there were 104 attacks and 3 deaths in Ratnagiri town.

53. In Southern Registration District, the epidemic was mild compared with that of last year but prevailed throughout the year. Out of 639 cases, 111 deaths were reported against 522 deaths in 1921.

In Belgaum District 46 deaths occurred in 19 towns and villages. Belgaum town reported 2 deaths only. In Dharwar District 41 deaths equal to a death-rate of ·04 were reported of which 16 were recorded in Dharwar (3), Hubli (4) and Gadag (9) towns. In Bijapur District 8 deaths occurred. Out of 150 attacks in Kanara District, 16 deaths occurred in 13 villages.

54. A brief but severe outbreak occurred in Guzerat District. Out of a total of 40 attacks, 22 deaths occurred, 9 in the Ahmedabad and 13 in the Surat Districts, 4 of the former being in Ahmedabad City. The remainder of this Registration District escaped entirely.

55. In Sind 3 districts out of 7 were affected, namely, Karachi, Sukkur and Larkana.

In Karachi District 80 cases occurred, all in Karachi City, which had recorded 128 deaths in the previous year. Sukkur District, on the other hand, returned 44 cases, as compared with 8 only in 1921, while 4 deaths occurred in Larkana District as against 52 in the preceding year. But whereas the case mortality in Larkana District was only 5·13, in Karachi City it reached as high as 38·67 compared with 13·89 in 1921. The outbreak in Karachi City was, therefore, of a somewhat severe type.

56. In Bombay City, on the other hand, the type of the disease was less severe than it had been during the past four years, 2·01 in (1919), 1·64 in (1920), 1·20 in (1921) and 0·46 in (1922). 524 deaths were recorded against 1,378 in 1921. The number of deaths among males was thus in the proportion of 252 to 100 deaths among females against 216 to 100 deaths in the last year. Only 4 deaths occurred among Europeans and Eurasians as against 11 in 1921.

57. Prophylactic inoculation was not practised during the year.

Respiratory Diseases.

58. 82,682 is the total number of deaths recorded as due to Respiratory Diseases against 93,336 in 1921. The death-rate was 4·31 against 4·87 in 1921.

The total mortality for previous years and rates per 1,000 are shewn in the following table:—

Year.	Number of deaths.	Rate per mille.
1901 to 1910 mean	57,723	3·12
1911	51,470	2·63
1912	70,712	3·61
1913	59,418	3·03
1914	65,941	3·37
1915	63,364	3·23
1916	79,882	4·08
1917	90,667	4·63
1918	119,680	6·11
1919	98,633	5·04
1920	96,486	4·93
1911 to 1920 mean	79,625	4·06
1921	93,336	4·87
1922	82,682	4·31

59. The highest death-rates were returned from the Collectorates of Surat (10·28), Ahmedabad (8·63), Kaira (7·87), Broach (7·74), Poona (6·27), Nagar (5·84), Nasik (5·27), and Ratnagiri (4·20). Bombay City recorded a death-rate of 12·92 from this cause as compared with 20·93 in the year preceding.

For rural areas the death-rate was 3·20 against 8·93 for urban areas, as compared with 3·26 and 11:56 respectively in 1921. The highest death-rates for urban areas were recorded in Poona City (18·66), Ahmedabad (16·37), Kirkee Cantonment (15·76), Kapadvanj (14·53), Surat (14·10), Broach (10·81), Umreth (10·77), Dakore (10·76), Bhiwandi (10·34), Hyderabad (9·54), Viramgam (9·33), Nasik (9·18), Nagar (9·11), Yeola (8·99), Nadiad (8·62) and Jambusar (8·12).

60. *Phthisis.*—15,823 deaths from this cause were registered equivalent to a death-rate of 0·83 for the Presidency as a whole. The corresponding figures for 1921 were 16,271 and 0·85 respectively. In the Central, Southern, Western, Guzerat and Sind Registration Districts the total deaths attributed to this cause were 5,209, 2,240, 1,954, 4,329, and 781 compared with 5,381, 2,225, 2,074, 4,476, and 668 in 1921.

In Bombay City the deaths registered as from phthisis, 1,310, were equal to a death-rate of 1·14 compared with 1,447 or a death-rate of 1·26 in the previous year.

The urban death rate was 1·60 and the rural 0·64 against 1·57 and 0·68 in 1921. The highest death-rates for urban areas were recorded in Bhiwandi (5·58), Poona City (3·96), Surat (3·85), Ahmedabad (3·51), Alibag (3·43), Chiplun (3·18) and Bijapur (3·11).

The highest death-rates for rural areas were again recorded in the districts of Ratnagiri (2·52), Kolaba (1·49), Kaira (1·46), Ahmedabad (1·42) and Surat (1·00). The Assistant Director of Public Health, Southern Registration District, reports :—

"In Kanara District there were 250 deaths of which 80 occurred in the above-ghat and 170 in the below-ghat talukas, *i.e.*, the sea coast. The sea coast of the Kanara District is in close communication with Bombay City where phthisis is always prevalent to a very great extent."

61. *Tuberculosis Institutions.*—The Assistant Director of Public Health, Sind Registration District, reports that "an Anti-Tuberculosis Dispensary which was opened in Karachi City in May 1921 is doing good work. The work of the dispensary is divided into two parts (*a*) in-door and (*b*) out-door. The in-door work consists of admitting the patients, taking their weight and temperature and giving them advice about the lines of treatment they should follow, and the methods of preventing the spread of the disease explained. Demonstrations in the museum attached to the dispensary are given to visitors. The out-door work consists of house to house visits by two lady Health Visitors for the purpose of discovering cases of Tuberculosis. During the year 1,361 houses were visited in this way and 1,103 patients admitted, of which 315 were found to be suffering from Tuberculosis. The disease is more common in persons between the ages of 16 to 35 and more prevalent in females than in males. This latter fact is due apparently to the more sedentary lives led by females and also to the prevalence of the purdah system".

62. *Pneumonia.*—15,995 deaths were registered equivalent to a death-rate of 0·83 for the Presidency as a whole. The corresponding figures for 1921 were 23,677 and 1·23 respectively. On reviewing the figures according to Registration Districts it is found that Guzerat with 3,374 deaths once again contributes a high proportion, as it has done annually, since Pneumonia was classified as a separate sub-head in 1919. The Central and Sind Registration Districts returned 1,800 and 1,241 deaths as compared with 2,307 and 2,653 for the previous year. For the Western and Southern Registration Districts the total deaths were 399 and 121 respectively, compared with 436 and 123 in 1921.

63. In Bombay City 9,060 deaths were registered equal to a death-rate of 7·88 against 14,722 and 12·81 respectively in 1921.

64. The urban death-rate was 3·53 and the rural only 0·18. The highest urban death-rates were recorded in Poona City (11·28), Kirkee Cantonment (7·88), Dakore (5·13), Nadiad (5·05), Mirpurkhas (4·51), Surat (4·36), Kapadvanj (4·19) and Hyderabad (3·50).

The highest death-rates for rural areas were recorded in the districts of Surat (2·10) and Broach (1·33).

Dysentery and Diarrhœa.

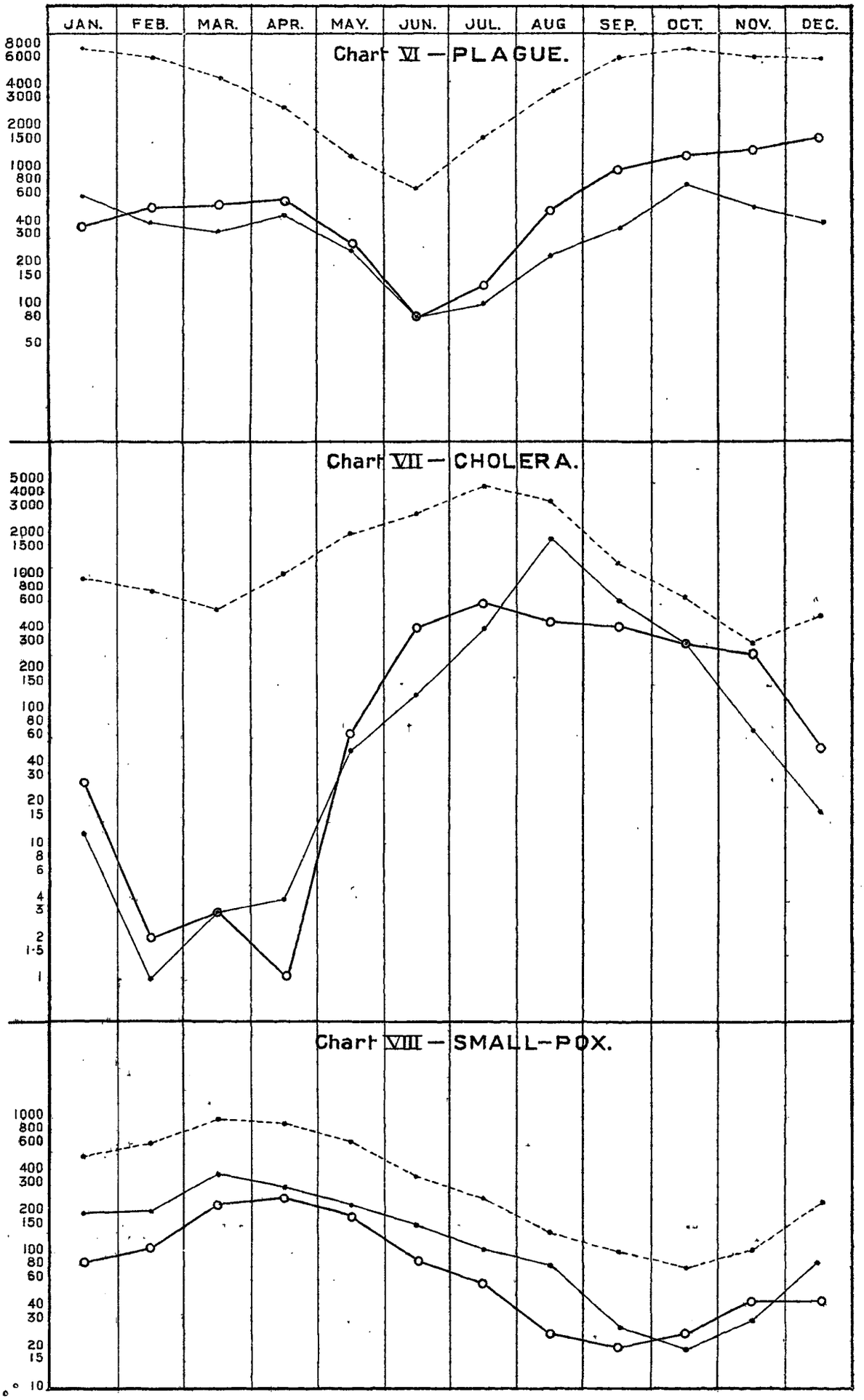
65. 21,118 deaths, the lowest on record since 1879, were registered, of which 11,303 were males and 9,815 females against 26,799 in 1921 and 36,330, the decennial mean. The death-rate was 1·10 against 1·40 in 1921, 1·68, the mean of the previous five years, and 1·90, the mean for the decennium. The number of deaths registered under Dysentery and Diarrhœa in previous years is as follows :—

Year.	Number of deaths.	Year.	Number of deaths.
1901 to 1910 mean	52,919	1917	36,321
1911	31,549	1918	32,058
1912	57,039	1919	38,317
1913	34,021	1920	29,895
1914	42,961	1911 to 1920 mean	36,806
1915	31,707	1921	26,799
1916	34,187	1922	21,118

MONTHLY INCIDENCE OF DEATHS FROM EPIDEMIC DISEASES.

1922 ——, 1921 ——, 1911–20 mean: ----

Semi-Log: Scales = deaths in thousands.



The urban death-rate was 1·77 and the rural ·94 against 2·30 and 1·18 respectively in 1921. The highest death-rates for urban areas were recorded in Kirkee Cantonment (4·00), Borsad (3·79), Pandharpur (3·49) and Gokak (3·40). There appeared a further fall in the death-rate for Poona City, *viz.*, 2·00 against 3·16 in 1921. Dakore and Islampur shew a fall in the death-rates to 2·50 and 2·51 against 4·38 and 2·65 in 1921, while the reverse is the case for Vengurla, 6·01 against 0·57 in 1921.

66. *Dysentery.*—Under the separate sub-heading, 4,410 deaths were recorded against 4,666, the death-rate being 0·23 against 0·24 in 1921. The urban death-rate was 0·50 as compared with 0·60 in 1921, while the rural death-rate remained stationary. Seven towns returned death-rates above 1 per thousand of population, *viz.*, Vengurla (5·70), Borsad (3·79), Gokarn (2·05), Ratnagiri (1·20), Alibag (1·19), Bassein (1·16), and Kurla (1·04). Borsad and Gokarn shew an improvement, *viz.*, 4·71 and 2·17 in 1921, while Vengurla was very heavily infected.

67. *Diarrhœa.*—16,708 deaths were recorded against 22,133. The death-rate was 0·87 against 1·16. The urban death-rate was 1·27 and the rural 0·78 as compared with 1·70 and 1·02. Ten towns returned death-rates above 2 per thousand of population, *viz.*, Pandharpur (3·33), Kirkee Cantonment (3·00), Gokak (2·60), Honavar (2·56), Bhatkal (2·52), Ashta (2·22), Baramati (2·19), Islampur (2·15), Athani (2·14) and Surat (2·05).

Cholera.

68. The number of deaths recorded from Cholera was 2,768 against 3,521 in 1921 and considerably below the decennial mean, 19,059. The death-rate was 0·14 against 0·18 in 1921, a decennial mean 0·97 and a quinquennial mean 0·85.

The following table gives the deaths recorded each year for the last 22 years :—

Year.	Number of deaths.	Year.	Number of deaths.
1901	13,600	1912	64,505
1902	3,229	1913	5,134
1903	1,825	1914	17,779
1904	13,156	1915	377
1905	5,396	1916	19,841
1906	46,119	1917	17,003
1907	7,656	1918	8,834
1908	1,759	1919	51,551
1909	28,714	1920	2,047
1910	3,694	1911 to 1920 mean	19,289
1901 to 1910 mean	12,515	1921	3,521
1911	5,817	1922	2,768

Details for all the districts are given in Annual Form No. VII.

69. Of the total deaths 544 only were recorded during the first half of the year. These were mostly in Bijapur. The remainder 2,224 occurred in the latter half of the year, infection being mainly localised in the districts of Belgaum, Dharwar and Bijapar.

In the Presidency proper out of 20 districts 13 were infected, while in Sind only 1 district reported deaths. 56 Registration Circles with 362 towns and villages were affected.

70. To take the Registration Districts separately : Bombay City returned 14 deaths against 66 in 1921.

71. Western Registration District recorded 31 deaths against 1,870 in 1921. Kolaba District alone accounted for 27 from July to October, the number of villages affected being 7. The percentage of deaths to attacks is 65·85. In Kolaba District Cholera prevailed at Karjat from 4th August to 20th September 1922 and in Khalapur from 28th September to 6th October 1922. The cases were local. There were 17 attacks and 12 deaths in one village—Dharni.

72. Central Registration District recorded 30 deaths only against 849 in 1921. Out of this 17 deaths were returned from Sholapur and 9 from Poona District. The number of affected villages was 4 in Sholapur and 5 in Poona District.

73. Guzerat Registration District returned only 3 deaths against 196 in 1921. Out of these one death occurred in Surat town (indigenous) and 2 in Amod rural circle, the accuracy of the diagnosis being doubtful in the latter instance.

74. Sind Registration District returned 25 deaths from this cause, the infection being confined to 4 villages in Karachi District. The disease was prevalent only in January. On the 4th of January 5 cases and 2 deaths were reported from Jakhiro village in Mirpur Sakro Taluka. On enquiry by the local medical officer it was found that the disease was brought from Malir. Cholera continued up to 22nd January, 10 cases and 8 deaths in all being reported. In addition three villages near Malir became infected and 15 persons are said to have died of the disease.

75. *Southern Registration District.*—The brunt of the epidemic of the year was borne by Belgaum, Dharwar, Bijapur and Kanara Districts, 2,665 deaths in all being reported, giving a mortality of 57·4 per cent. In the first 3 districts 8, 10 and 8 rural circles and 1, 4 and 4 town circles were affected, the total number of villages returning deaths being 62, 115 and 152, *i.e.*, 5·8, 9·0 and 13·4 per cent. respectively of the total number of villages in the districts.

The epidemic broke out at Fatehpur and Talikot villages of the Muddebihal Taluka of the Bijapur District on the 4th and 6th May. The infection was introduced from Ainapur and Nagnur villages in the Nizam's Dominions. Further, on the 11th May Mahakut Fair was held in the Badami Taluka which was visited by people from the cholera affected Nizam's Territory and from the different parts of the Bijapur District. The infection was carried chiefly along the main lines of communications but the epidemic also followed the course of rivers, the Krishna, Ghataprabha and Malaprabha playing an important part in the distribution of the infection.

In the Dharwar District also the disease was imported into Gadag town from the Nizam's Territory. In the Belgaum District the disease first made its appearance in Yadwad village of the Gokak Taluka while it was imported from Rubkadi village on the river Krishna in the Sangli State. In Kanara District the disease was introduced from the Tripati Fair in the Madras Presidency.

Cholera first broke out in the Muddebihal Taluka of the Bijapur District, spread to Bagalkot town and rural circle, Sindgi rural circle and Gadag town. in June it was prevalent in Bilgi Peta, Badami, Bagewadi, Hungund, Mundargi, Nargund, Bijapur, Gadag and Gokak and Guledgud and Bijapur town circles. In July Parasgad, Sampgaon, Dharwar, Navalgund, and Ron talukas and Navalgund, Hubli and Ilkal town circles were attacked. In August Karajgi Taluka, in September Athani and Kalghatgi, in October Hukeri, Kumtha and Sirsi talukas and Kumtha town circle, in November Murgod Mahal and Bankapur Taluka became infected.

All the talukas of the three districts were infected with the exception of Belgaum, Chandgad, Ranebennur, Kod, Hangal and Indi. The following towns also escaped infection :—Belgaum Town and Cantonment, Gokak, Nipani and Ranebennur, while in Kanara District only Sirsi and Kumtha Talukas and Kumtha town were infected.

The epidemic was prevalent in the Southern Registration District from 4th May to the end of the year.

76. *Preventive Measures.*—Immediately on receipt of the information of an outbreak of cholera, printed leaflets were sent to the village officers, Municipalities and Mamlatdars concerned. Collectors and Mamlatdars of the talukas surrounding the infected talukas were written to to adopt anti-cholera measures, *viz.*, disinfection of wells on important lines of communication and the protection of drinking water-supplies from pollution by wayfarers and others bathing or washing clothes. Inspectors of Sanitation and Vaccination were detailed to visit the worst infected towns and villages and to assist the Revenue authorities in carrying out anti-cholera measures, but since there is only one Inspector per district and he has to attend to his vaccination work in addition, the amount of assistance which can be rendered by this agency is limited.

77. *Sterilization of water-supplies.*—The special measures introduced for the sterilization of water during the Sinhast (1920-21), for the protection of the sacred

bathing tanks, and the purification of the drinking water-supplies were continued at Nasik and Trimbak throughout the year under report.

Briefly summarized they are as follows :—

(*i*) Treating the sacred tanks with bleaching powder periodically, the frequency varying with the season, and just before, during and after each "Parvani" when a large influx of pilgrims is expected.

(*ii*) Filtering water of the Aruna Nalla through a sand filter before it is allowed to enter the sacred Ram Kund in the Godavari at Nasik.

(*iii*) Periodically emptying, removing the silt and cleaning all the tanks.

(*iv*) The pipe water-supply at Trimbak is chlorinated before the water is issued for public consumption.

The Trimbak Municipality took over the water-works from the Executive Engineer, Northern Sanitary District, during the year. Mr. Phatak (The Municipal Secretary and Sanitary Inspector) took over the chlorination of the water-supply from the Public Works Department.

In the Guzerat Registration District during the period from 1st January to 15th March 1922, the Instructor appointed under Government Order, General Department No. 7229 of 7th July 1920, visited 5 talukas, demonstrations in purifying well water by bleaching powder and permanganate of potash being given. Village centres were visited in addition.

In all 290 people received instruction in purifying well water by permanganate of potash and 34 by bleaching powder.

In Sind during the same period as mentioned above, two Instructors visited 17 talukas and 31 village centres. In these talukas they gave 62 demonstrations. Total number of people who attended these demonstrations and received instructions was 3,513. Of these, 1,243 were Government officials, 49 Municipal and Local Board officials and 2,221 private persons.

The services of these Instructors were then dispensed with on financial grounds.

Plague.

78. During the year there were 8,379 deaths recorded as due to Plague compared with 4,672 in 1921. The death-rate was ·44 against ·24 and the quinquennial mean death-rate of 2·76. With the exception of the previous year the annual total mortality is the lowest since 1897. It may be, as conjectured by the Public Health Commissioner with the Government of India, the beginning of a period of enhanced plague mortality.

79. The total number of deaths since 1901 is given below :—

Year.	Number of deaths.	Year.	Number of deaths.
1901	128,259	1912	28,984
1902	184,752	1913	25,288
1903	281,269	1914	20,060
1904	223,957	1915	43,824
1905	71,363	1916	79,507
1906	51,525	1917	162,874
1907	93,609	1918	79,478
1908	27,345	1919	9,626
1909	24,316	1920	13,857
1910	25,043	1921	4,672
1911	10,399	1922	8,379

80. *Distribution.*—A reference to Annual Form No. XII will shew that the disease though mild was widespread. Three districts, namely, Dharwar, Belgaum and Poona reported 4,836 deaths between them, the highest death-rate being recorded in Dharwar (2·06) and the lowest in Broach, Ahmedabad and Sukkur Districts.

81. In Dharwar District 2,138 deaths were recorded against 1,255 in 1921. The death-rate was 2·06 against 1·21 in 1921 and a quinquennial mean of 4·39. Dharwar Town Circle, Hubli, Hangal, Dharwar and Kalghatgi rural circles suffered heavily. Dharwar town circle returned a death-rate of 13·49.

In Belgaum District 1,430 deaths from Plague were recorded against 202 in 1921. The death-rate was 1·51 against 0·21 in 1921 and a quinquennial mean of 3·92. Belgaum town circle, Belgaum Cantonment and Belgaum rural circle suffered heavily, the mille ratio being 19·41, 5·81 and 4·20 respectively. Rat destruction operations were carried out by Belgaum and Gokak Municipalities. At Gokak and Chandgad 13,943 and 4,507 rats respectively were destroyed. Gokak and Chandgad towns remained free from Plague throughout the year. Belgaum Municipality issued 788 traps daily and 18,639 rats were destroyed during the year. Out of these 407 were found on examination to be plague infected.

Bijapur District.—Only 10 deaths were recorded against 8 in 1921.

Kanara District.—Seventy-two deaths were recorded against 18 in 1921. Of the 72 deaths 32 were registered in Mundgod rural circle, 30 in Yellapur rural circle, 9 in Haliyal rural circle and 1 in Sirsi rural circle.

82. In Western Registration District 1,318 deaths were recorded from Plague against 1,494 in 1921. The quinquennial mean death-rate was 3·18. All the districts were affected except West Khandesh which remained free throughout the year.

In East Khandesh District 830 deaths from Plague were reported against 868 in 1921. The death-rate was ·77. Out of these Chopda, Dharangaon and Erandol Towns reported 81,194 and 158 deaths, respectively.

In Nasik District 35 deaths were registered against 243 in 1921. The death-rate was ·04. Out of this Nasik town reported 2 deaths only. The Malegaon Municipality carried out rat destruction by trapping throughout the year. Five hundred and fifty traps were used with a result that 44,966 rats were destroyed. The operations were carried on under the supervision of a qualified Sanitary Inspector assisted by a Sub-overseer and four coolies, the expenditure incurred being Rs. 712-6-6 which comes to 3 pies per rat destroyed.

In Thana District 356 deaths were registered against 172 in 1921. The death-rate was ·47. Out of these Thana town contributed 89, Kalyan 72 and Bassein 54.

In Bombay Suburban District 87 deaths were registered against 93 in 1921. The death-rate was ·57. Out of this Bandra Town contributed 33. The district was free during August, October and November.

In Kolaba District 10 deaths were registered against 60 in 1921. The death-rate was ·02. Alibag rural circle was affected in January, March and April and Karjat and Pen talukas during September.

83. In Guzerat Registration District 57 deaths were reported from plague against 14 in 1921. Of these Surat District alone returned 54 deaths, Broach District one and Ahmedabad District two. The first case in the Registration District occurred in February 1922 in Broach Town and was imported from East Khandesh. The second case reported from Surat town was imported from Goondia in the Central Provinces.

84. In Sind Registration District 687 deaths were registered against 55 in 1921. The death-rate was ·21. Out of these Karachi Town contributed 664 or 94 per cent. of the total deaths from Plague. Most of the deaths in Karachi were registered during the first six months of the year which is the plague season. The highest number of deaths, *i.e.*, 314 was reported in April.

Besides Karachi Town, plague deaths were reported from Karachi Cantonment, Tatta, Hyderabad, Tando Adam and Sukkur Towns and also from five rural villages. Karachi Town was responsible for disseminating infection to all these other places. Ratting operations were carried out in Karachi throughout the year 500 traps being issued daily with the result that 97,090 rats were destroyed, *i.e.*, an average of 266 rats per day.

85. In the Central Registration District 2,038 deaths were recorded against 819 in 1921 and 2,757, 2,050 and 17,169 respectively in the previous three years. The highest mortality was recorded in the Poona Collectorate which returned 1,268 deaths against 11 in 1921. Out of 79 Registration Circles 33 were affected against 18 in 1921. Out of 5,868 villages 122 were affected in the year against 57 in 1921. Eight talukas and 5 town circles of Poona Collectorate were affected with plague which commenced from the month of June and continued till the end

of the year. Out of 1,268 deaths in Poona Collectorate 478 were reported from Poona City and 370 from Mawal Taluka, 30 villages returning cases. The highest mortality occurred during the month of December.

Poona City.—The first case was imported in Bhamburda from Thokarwadi near Lonawla on 16th July. Two more cases were imported in Shukrawar Peth from Vadgaon. For some time the outbreak was confined to Bhamburda where 13 attacks and 7 deaths occurred; but by the beginning of September, plague assumed an epidemic form in the City. From July to December there were 607 attacks and 469 deaths.

At a Meeting of the Sub-Committee of the Municipality on 9th October, it was resolved to engage four Municipal inoculators. They and the local medical practitioners succeeded in inoculating 22,105 persons. Inoculation was also performed and medical relief given at the three Municipal Dispensaries.

Rat trapping operations were carried out with a result that 9,917 rats were caught and destroyed by setting on an average 1,300 traps per day. A rat gang of 9 Mukadams and 18 coolies was engaged for the destruction of these pests but the number proved insufficient for the requirements.

The Officer Commanding, Indian Station Hospital, reports that "an outbreak of Plague began quite suddenly on 13th December with 5 simultaneous attacks among the combatants of the 2nd Lancers stationed at Ghorpuri. They must have been infected outside the lines. These cases were followed by 3 attacks, in December, 1 in January and another in February when this outbreak ceased.

Some delay at the commencement of the outbreak in completing the inoculation of the purdah families of the Regiment was surmounted by engaging the services of a lady doctor for the purpose.

Trapping operations were carried out in the Lines with the result that 900 rats were caught; 54 were examined for plague and 15 found plague infected.

In Satara District 331 deaths were recorded against 800 during the previous year. Out of these 204 were reported from Khanapur Taluka, the highest number in the district against 18 in 1921. Of 1,342 villages in Satara Collectorate 33 returned cases, while out of 19 Rural Circles, 6 were affected.

Ratting operations were carried out in Panchgani with the result that 3,067 rats were caught and destroyed. In Mahableshwar 714 rats were accounted for. The town was divided into seven wards and traps were issued daily to each successive ward; each ward was thus trapped once a week.

In Sholapur District 388 deaths were reported against none in the last year. Three hundred and forty deaths were reported from Barsi Taluka against one in 1921. Twenty-six and 15 deaths were reported from Sholapur Taluka and Barsi Town respectively.

In Ahmednagar District 17 deaths were reported against 7 in 1921. The death-rate was ·03. Ahmednagar town circle returned 1 death only.

In Ratnagiri District 34 deaths were recorded against 1 for the year 1921. The death-rate was ·03; 33 deaths were reported from Ratnagiri Taluka. Only one death was reported from Ratnagiri Town and one from Vengurla Town.

86. The total number of deaths recorded in Bombay City was 629 as compared with 807 of the previous year.

87. Ratting operations were carried out with a result that 755,938 rats were caught and destroyed, 344, 646 rats were examined, and 6,400 found plague infected giving a percentage of 1·8. During the year the daily average number of traps issued in the city was 1,310.

88. *Inoculation.*—One Temporary Assistant Surgeon and one Sub-Assistant Surgeon were engaged on inoculation duty. They visited 19 villages and inoculated 3,331 persons. Their services were dispensed with at the end of March 1922, no further grants being forthcoming for plague inoculation work. Inoculation was also performed by Civil Surgeons, Officers in charge of Hospitals and Dispensaries, Medical Officers in charge of Prison Hospitals, private medical practitioners and others.

The total number of persons inoculated during the year under report was 73,098 as compared with 39,208 in the previous year. Of these 69,656 were performed in British Territory and 3,442 in Native States.

By districts the number of operations were :—24,546 in Poona ; 6,965 in Belgaum ; 2,175 in East Khandesh ; 1,917 in Ahmednagar ; 1,479 in Sholapur ; 1,216 in Thana and 936 in Satara. In the towns of Poona, Belgaum, Dharwar and Kalghatgi 23,928, 6,660, 2,559 and 1,717 inoculations, respectively, were performed and in Bombay City 9,876 (as against 17,471 in the preceding year). In the Jails 8,951 inoculations were performed of which 4,847 were in the Common Prison, Bombay, 1,917 in Visapur Deccan Convict Gang and 934 in Thana Prison.

Inoculation outfit boxes were supplied on loan to certain Medical Officers at their request.

One hundred and forty-two cases of plague amongst persons inoculated in the Bombay Presidency were reported of which 46 proved fatal. 50 were attacked within 10 days of inoculation of which 26 proved fatal giving a mortality of 52 per cent. against only 21 per cent. among those attacked, 10 days after being inoculated.

89. *Plague Operations in Belgaum and Dharwar Districts* :—Dr. C. Strickland remained in charge of the operations until the final closure of the scheme. He relinquished his charge at the end of February.

90. In accordance with Government Order, General Department, No. 272 of 26th May 1922, requests for traps were complied with in the case of certain local bodies, 1,997 traps being supplied gratis during the year. 2,686 traps were issued on loan and 4,145 sold, the sale-proceeds being credited to Government.

Small-pox.

91. 1,170 deaths from small-pox, the lowest figure recorded since 1887, were registered against 1,771 in 1921 and a decennial mean of 4,778. The death-rate was 0·06 against 0·09 in 1921 and 0·21 the quinquennial mean. By sex, 610 were males and 560 females.

The annual mortality for previous years is given below :—

Year.	Number of deaths.	Rate per mille.
1901 to 1910 mean	4,962	·27
1911	4,727	·24
1912	6,331	·32
1913	9,833	·50
1914	4,209	·21
1915	1,425	·07
1916	3,289	·17
1917	3,095	·16
1918	8,063	·41
1919	6,232	·32
1920	3,536	·18
1911 to 1920 mean	5,074	.26
1921	1,771	.09
1922	1,170	.06

92. *Distribution.*—Detailed figures are given in Annual Form No. VIII.

The incidence as regards severity was unusually light this year. Nine districts almost entirely escaped, Sholapur being quite free. One hundred and thirty Registration Circles and 290 villages were infected against 154 and 431 in 1921.

As regards rural areas the death-rate was highest in Panch Mahals 0·11, Kanara and East Khandesh 0·10 each, and Bombay City 0·05. Among towns Junnar (1·36), Surat (1·27), Poona City (1·07) and Karachi (0·94) returned 10 ; 149 ; 143 and 187 deaths respectively.

Of the 1,170 deaths from small-pox, 315 were infants under one year and 538 children between 1 and 12 years of age.

April was the month of greatest severity (249 deaths), 942 or 4/5ths of the total deaths being recorded in the first half of the year.

93. The Officers of this Department enquired into the vaccinal state of 198 cases of small-pox with the following results :—

Sixty-three were found to have been vaccinated of which 4 died ; of the 135 unvaccinated 45 died. The case mortality being therefore 6·3 among vaccinated and 33·3 among unvaccinated.

INJURIES.

94. This very definite cause of death permits of no personal error by the registrar and the figures recorded annually are subject to but little variation as the following table shows :—

Year.	Number of deaths.	Year.	Number of deaths
1901 to 1910 mean ..	6,879	1917	7,650
1911 ..	7,452	1918	7,761
1912 ..	7,175	1919	7,896
1913 ..	7,711	1920	7,721
1914 ..	7,670	1911 to 1920 mean ..	7,745
1915 ..	8,113	1921	7,888
1916 ..	8,096	1922	7,810

95. There has been a fall of 137 male deaths from injuries and an increase of 59 female deaths as compared with the previous year. Further comparisons arranged under the various heads are set forth in the following table :—

Causes.	1922.			1921.		
	Male.	Female.	Total.	Male.	Female.	Total.
Drowning	1,303	1,652	2,955	1,274	1,544	2,818
Poisoning	70	29	99	96	43	139
Hanging	136	68	204	164	62	226
Wounding	1,194	508	1,702	1,035	441	1,476
Wild Beasts	32	9	41	55	16	71
Snake-bite	902	503	1,405	878	543	1,421
Rabies	100	60	160	115	58	173
Railway Accidents	145	27	172	117	30	147
Other causes	598	474	1,072	883	534	1,417
Total ..	4,480	3,330	7,810	4,617	3,271	7,888

96. 1,405 deaths were attributed to snake-bite against 1,421 in 1921. The highest number occurred in Ratnagiri 285, next in order being Thana 116, Ahmedabad 93, Satara 90, Thar and Parkar 87, Karachi 75, Nasik 54, Poona 53 and Kolaba 50, while no deaths from this cause occurred in Bombay City.

In Southern Registration District, there were 107 deaths from snake-bite. Of these 71 were among males and 36 among females; 84 deaths were enquired into. In 21 cases the snake was identified as a cobra and in these the interval between the bite and death varied from one to ten hours.

In Guzerat Registration District, 125 deaths were caused by "black serpents," 16 by cobra, while 83 deaths were caused by others, the species being unknown.

In Sind Registration District, 258 deaths were due to snake-bites. 186 deaths were identified as being due to vipers and 21 to cobras. The duration between the bite and death varied from 30 minutes to 15 days.

97. 160 deaths were reported from rabies (100 males and 60 females) against 173 in 1921.

98. Suicidal deaths show an increase of 11 per cent. this year as compared with 1921. The actual figures are for 1922, males 285, females 202 and total 487 and for 1921, males 268, females 170 and total 438. The methods adopted by suicides in the nine districts that returned the highest number of deaths are tabulated as follows :—

Analysis of deaths by suicide.

Name of District.	Drowning.	Poisoning.	Hanging.	Wounding.	Total.
Bombay City	17	24	8	13	62
Dharwar	6	..	27	1	34
Bijapur	2	..	23	4	29
Jacobabad	2	1	6	20	29
Satara	8	7	7	3	25
Belgaum	7	..	16	1	24
Thana	5	1	18	..	24
Kaira	15	6	3	..	24
Ahmedabad	10	2	8	1	21
Total for abovenamed areas ..	72	41	116	43	272

Other Causes.

99. 130,766 deaths (males 66,665 and females 64,101) were registered as compared with 134,263 in 1921 and the decennial mean 155,181. There is, therefore, a reduction in actual deaths recorded of 2½ and 14 per cent. respectively on the total of the periods contrasted, while the incidence of death amongst every thousand of the population living is 6·82 for the year in review against 7·01 for 1921, 7·94 the mean for the decade and 8·12 the mean for the five years 1917 to 1921.

Year.	Number of deaths.	Rate per mille.	Year.	Number of deaths.	Rate per mille.
1901 to 1910 mean ..	140,618	7·61	1917 ..	181,877	9·29
1911 ..	130,871	6·68	1918 ..	184,787	9·43
1912 ..	162,143	8·28	1919 ..	150,156	7·67
1913 ..	133,815	6·83	1920 ..	141,662	7·23
1914 ..	159,720	8·15	1911 to 1920 mean ..	154,842	7·91
1915 ..	138,006	7·05	1921 ..	134,263	7·01
1916 ..	165,382	8·44	1922 ..	130,766	6·82

100. *Deaths from child-birth.*—4,203 deaths were reported under this sub-head against 4,501. For the Western, Central, Southern, Gujarat and Sind Registration Districts the total deaths were 1,411, 817, 738, 367 and 789 respectively as compared with 1,405, 693, 643, 383 and 906 in 1921. In Bombay City only 81 deaths were recorded during the year against 471 in 1921.

Taking the Presidency as a whole one woman was reported as having died as the result of child bearing to every 148 live births as compared with 139 in 1921—a slight improvement.

For the different Registration Districts, the proportion of live births to each fatal case of child bearing was Western Registration District 1 to 102, Southern 1 to 161, Central 1 to 204, Gujarat 1 to 284 and Sind 1 to 85. In Bombay City one woman died to every 248 recorded births.

Amongst Collectorates the toll of life exacted by child birth is greatest in Kanara where a mother died to every 52 births registered. The maternal mortality for other districts of the Southern Registration District are Bijapur 1 to 278 births, Dharwar 1 to 218 and Belgaum 1 to 205. Elsewhere the following districts show high rates :—

Kolaba 1 to 124 births, Thana 1 to 127, Poona 1 to 220, Ahmednagar 1 to 215, Ratnagiri 1 to 216, Surat 1 to 251, Panch Mahals 1 to 199, Upper Sind Frontier 1 to 106 and Karachi 1 to 67.

The excessive rate for Kanara is stated by the Assistant Director of Public Health " to be mainly due to the devitalising effect of malaria and venereal diseases sapping vitality at the child bearing period."

For the Presidency as a whole the maternal mortality rate for Urban areas was 1 to 90 births, while for Rural areas it was 1 to 166 as compared with 63 and 176 respectively in 1921.

101. The number of deaths from the chief causes for each Collectorate by months are shown in Annual Forms Nos. VII to XII.

SECTIONS VII AND VIII—No remarks.

SECTION IX.

SANITARY WORKS—CIVIL.

MUNICIPALITIES

102. Two new municipalities were created during the year bringing the total to 159 with a population of 26,82,030, the aggregate income for them all during the year being Rs. 1,76,16,743. Rs. 1,08,84,085 or just under 62 per cent. of the income was raised by taxation, giving an incidence per head of population of Rs. 4-0-11 which shows an increase of nine annas and one pie per head as compared with the previous year. Taxation varied between Rs. 9 per head in Karachi City and As. 8 and Ps. 9 in the small municipality of Betavad in West Khandesh. These figures include the special conservancy cess in the case of many municipalities.

The following statement shows the incidence of income and taxation per head of population in the larger municipalities :—

Bombay	19—16
Karachi	20— 9
Ahmedabad	7— 5
Poona	8— 5
Surat	5— 4
Hyderabad	8— 6
Sholapur	4— 3

The expenditure on public health measures in Karachi City equalled Rs. 9 per head of population and averaged slightly over Rs. 2 in the remaining municipalities. In Bombay City the figure was at the rate of Rs. 16 approximately.

The following table shows the death-rate amongst the municipal population in each district. Out of 159 municipalities 35 suffered from plague, 20 from small-pox and 18 from cholera, while 17 recorded cases of influenza.

STATEMENT A.

Statement showing by districts combined birth and death rates for Municipalities in the Bombay Presidency during the year 1922.

Districts.	Number of Municipalities.	Ratio of Births per 1,000 of population.	Ratio of Deaths per 1,000 of population.				
			Cholera.	Small-pox.	Plague.	Influenze.	From all causes.
Ahmedabad	10	35·18	·00	·00	·01	·01	32·11
Kaira	9	34·82	·00	·02	·00	·00	26·24
Panch Mahals	2	21·38	·00	·00	·00	·00	13·75
Broach	3	41·04	·00	·00	·02	·00	26·95
Surat	3	25·78	·01	1·01	·01	·04	28·74
Thana	4	25·75	·02	·11	3·53	..	27·73
Ahmednagar	4	23·80	1·01	·00	·00	·01	26·64
East Khandesh .. × ..	12	27·60	..	·06	2·55	·57	21·96
West Khandesh	7	32·93	..	..	..	·03	23·07
Nasik	7	27·93	..	·04	·02	·11	23·63
Poona	12	15·26	..	·75	2·82	·06	35·68
Satara	12	24·24	·02	·05	·57	..	18·38
Sholapur	5	33·92	·05	..	·11	..	33·17
Belgaum	6	31·92	·08	·10	8·21	·02	29·86
Bijapur	4	35·87	2·28	..	..	·01	25·60
Dharwar	10	31·83	1·32	..	2·94	·09	27·67
Kanara	8	30·14	·06	·14	·05	·03	18·22
Kolaba	7	22·19	..	·05	..	·05	20·86
Ratnagiri	4	26·45	..	·13	·03	·04	20·09
Karachi	5	33·48	..	·85	3·02	·36	30·87
Hyderabad	6	37·50	..	·05	·04	..	21·03
Sukkur	5	28·15	..	·08	·01	..	21·29
Larkana	5	26·55	..	·03	..	..	22·01
Nawabshah	2	20·09	..	..	·05	..	10·35
Thar and Parkar	2	12·55	..	..	..	..	17·26
Upper Sind Frontier	1	19·10	..	·19	..	..	14·94
Bombay Suburban District ..	4	17·58	..	..	1·09	..	31·61

Eight Municipalities shared the general improvement in the death-rate for the year. In 5 Revenue Districts as compared with 3 in 1921 the municipal death-rate exceeded 30 per 1000 of population. The districts showing this high figure suffered from plague, small-pox and influenza.

Complete sanitary surveys were made by the Assistant Directors of Public Health in 4 towns in the Western Registration District, 7 in the Central Registration District, 6 in the Southern Registration District, 12 in the Gujarat Registration District and 3 in Sind; and advice in sanitary matters was given by these officers in 55 towns. Action was taken by many of the Municipalities in matters of conservancy, water-supply, the prevention of spread of epidemics and in measures of a more general nature. The following is a brief summary of these :—

Dhulia—Public latrines for males and females were provided. *Nandurbar*—Purchased 40 zinc and constructed 5 masonry dust-bins and procured 2 night-soil carts. *Chopada*—Attended to the disposal of night-soil and surface cleanliness. *Raver*—Constructed 4 new public latrines (to the East of the town). *Dhulia, Bhusaval* and *Jalgaon*—Repaired roads and gutters. *Igatpuri*—Constructed a beef slaughter-house at a cost of Rs. 1,450 and continued rat-trapping throughout the year. *Kalyan*—Entertained a qualified Sanitary Inspector. *Bandra*—Laid an underground pipe drain 316 feet long in the Bazar Section at a cost of about Rs. 2,700 to divert waste water to the sea. This measure has greatly improved the sanitation of the locality. *Alibag*—Latrines of six seats constructed. *Uran*—Attended to road sweeping and cleansing of latrines. *Mahableshwar*—Purchased a new incinerator and constructed a new wall at the Bishop Tank. *Lonavala*—Carried out the work of filling up borrow pits on the south of the Railway line between Lonavala and Bhangarwadi at a cost of Rs. 1,100. *Sangamner*—Constructed new drains and repaired old ones. *Alandi*—Constructed a sewer line at a cost of Rs. 2,835. *Mehamadabad*—Carried out disinfection of wells every fortnight. *Kaira*—Surplus spillage water was drained off and rank vegetation removed to check the spread of malaria. Quinine was distributed free to the poor. *Ahmedabad*—Medicines for treatment of influenza were provided at the dispensaries. Six midwives were employed to give advice and attend labour cases free of charge, while seven "creches" were established in mill compounds. Refuse removal by motor transport was commenced in one-half of the city and is working satisfactorily and carts for the removal of rubbish, night-soil and sullage water were also purchased. Forty-nine milk vendors were prosecuted for the adulteration of milk, sale of separated milk as pure milk and for failing to keep their utensils clean. *Mirpur Khas*—Improvements to meat-market, provision of dust-bins and cess-pools.

The Nasik system of trenching night-soil has proved a great success in Nadiad Town where Rs. 807 were realized from the sale of poudrette. Dohad Municipality on the other hand realized only Rs. 215. Viramgam Municipality realized Rs. 77 during the year 1922 against Rs. 44 in the previous year. The system is in operation in 9 towns in Guzerat and is reported on as working satisfactorily. It has been introduced also in Malegaon, Dhulia, Dharangaon, Bhusaval, Jalgaon and Sukkur.

A large number of Municipalities remain below standard in conservancy establishment and sanitary implements. Endeavours are, however, being made in the following towns and cities to increase their establishments :—Ahmedabad, Surat, Broach, Bulsar, Anand, Kapadvanj, Viramgam, Dakore, Dholka, Umreth, Dholera, Shirpur, Nandurbar, Bhusaval and Sukkur.

103. *Municipal Health Staff.*—During the year under report Medical Officers of Health with full qualifications were employed in Karachi, Hyderabad, Surat, Poona and Ahmedabad; and in Karachi an Assistant Health Officer possessing the B.Hy. of Bombay University was employed. Health Officers holding the medical degree of Bombay University in addition to the Sanitary Surveyors' qualification were employed at Dhulia, Bandra and Sholapur. The Health Officers of Broach and Sukkur have no public health qualifications. Nasik, Dakore and Nadiad employed Health Officers of the standing hitherto described as third class, *i.e.*, holding a medical qualification *plus* the certificate of the Royal Sanitary Institute obtained in Bombay.

The classes for training Sanitary Inspectors held by the Executive Health Officer, Bombay Municipality, were well attended and the number of qualified medical men who take the course is on the increase. It is to be hoped that the remaining municipalities in this Presidency will also see their way to employing an adequate health staff as funds permit. A syllabus of a more advanced course of instruction for prospective Health Officers of smaller towns has been sanctioned by Government and classes were formed during the year under report.

Sixty-two Sanitary Inspectors were employed in 29 towns as follows:—Ahmedabad 14; Poona 6; Sholapur 6; Surat 5; Karachi 3; Dhulia, Jalgaon, Bandra, Sukkur 2 each; and in the following 1 each—Broach, Viramgaon, Ahmednagar, Satara, Pandharpur, Barsi, Panchgani, Bhusaval, Malegaon, Thana, Kalyan, Kurla, Belgaum, Dharwar, Hubli, Gadag, Bijapur, Bagalkot, Hyderabad and Larkana. In 1921 there were only 52 men of this class distributed among 28 towns.

The following Municipalities resolved to adopt the scheme laid down in Government Resolution, General Department, No. 368 of 1st September 1921 with regard to Health Officers and Sanitary Inspectors:—Ahmedabad, Surat, Viramgaon, Bulsar and Poona.

Owing to financial difficulty Broach Municipality could not undertake the responsibility of engaging a Health Officer on pay sanctioned recently in Government Resolution, General Department, No. 368 of 1st September 1921. They will reconsider the question when their finances improve.

The Municipalities of Rander, Prantij, Bulsar and Kaira rely upon any medical officers amongst their Councillors for advice in sanitary matters, while the municipalities of Dholka, Sanand, Dhandhuka and Kapadvanj pay the Dispensary Medical Officers an allowance of from Rs. 10 to Rs. 20 per mensem for such advice.

Local sanitation by Dispensary Medical Officers.—In the Central Registration District, advice was given by the Sub-Assistant Surgeons to municipalities of Baramati, Sirur, Alandi, Jejuri, Sangola, Madha, Dapoli and Malvan.

The Medical Officers in charge of Dispensaries in Sind are still very reluctant to take action in bringing the sanitary deficiencies of their towns to the notice of the Assistant Director of Public Health. No instance of the kind occurred during the year.

The Assistant Director of Public Health, Southern Registration District, visited 12 dispensaries and conferred with the medical officers with regard to local public health matters.

The arrangements of the Dholka and Modassa Municipalities in paying Rs. 10 and Rs. 5 respectively as local allowance to the Sub-Assistant Surgeons for doing the duties of Health Officer are not proving satisfactory. If the Sub-Assistant Surgeons' plea that they have no time to attend to sanitation is correct, it seems a waste of money for the municipalities to make an allowance.

104. *Sanitary Board.*—For details regarding progress in water-supply and drainage projects reference is invited to the report of the Sanitary Board published in Appendix 1.

105. *Town Improvement Schemes.*—No large town improvement schemes for which Government grants were provided have been completed during the year. There are two works in progress, namely, (1) opening of the Budhawar Road, Dane Ali Section of the East and West Road, Poona City, and (2) the extension of a pucca masonry drain at Bagalkot in Bijapur District.

106. *District and Taluka Local Boards.*—The combined income of the 26 District Local Boards and 219 Taluka Local Boards amounted to Rs. 1,49,81,865. Income and taxation per head of population were 13·8 and 3·4 against 10·5 and 2·6 annas in 1921. A total sum of Rs. 22,68,349 was spent by these bodies on communications while Rs. 3,38,810 were spent on public health work.

Under Government Resolution, General Department, No. 1570 of 27th April 1922, the following grants were placed at the disposal of the commissioners of Divisions for distribution among the District Local Boards of the Presidency proper and Sind. As no grant was received this year from the Government of India,

the Government of Bombay were unable on account of financial stringency to increase the original Provincial grant of Rs. 8,24,000 by more than Rs. 2,76,000. The total grant therefore during the year 1922-23 was Rs. 11,00,000 which was allocated by Government as follows :—

Divisions.	Grant from Provincial Revenue.
	Rs.
Northern Division	2,75,000
Central Division	3,00,000
Southern Division	2,25,000
Sind Division	3,00,000
Total ..	11,00,000

Government also sanctioned a grant-in-aid of Rs. 1,20,000 for improvements of village water-supplies in their General Department Resolution No. 2429 of 21st April 1922 which was distributed as follows :—Northern Division Rs. 32,000, Central Division Rs. 36,000, Southern Division Rs. 20,000 and Sind Rs. 32,000.

These grants were supplemented by allotments from Local Funds and popular contributions and were expended in constructing wells, tanks, troughs and cisterns, in repairing old wells and closing step-wells, in deepening existing tanks and in boring and jumper operations.

Seventy-eight step-wells were converted into draw-wells, out of which twenty were in Ahmednagar and 39 in Ratnagiri Districts. Three hundred and seventeen draw-wells were newly constructed, 53 of them being distributed among 17 villages of the Ratnagiri Collectorate. Steady progress continues to be made in the conversion of existing step-wells throughout the districts in which guineaworm infection is prevalent.

107. *Acquisition of lands for extension of village sites.*—Progress made in the acquisition of village sites for the relief of overcrowding may be summarized as follows :—

Poona District.—The Dane Ali Section of the East-West Road Scheme in Poona City was commenced in 1920 and the work is still in progress. The houses acquired in 1921-22 were demolished in 1922-23, the area thus cleared being divided into plots, which were sold for building purposes. A road is under construction and will be completed during the current year.

Belgaum District.—Land for a new village site at Govankop in Murgod Petha was acquired. Two forest numbers were taken over to relieve congestion at Londha, Taluka Khanapur.

Bijapur District.—In Jamaldini, Muddebihal Taluka, and in Baglur, Sindgi Taluka, lands were acquired for the relief of overcrowding.

Hyderabad District.—The acquisition of two survey numbers measuring 13 acres and 30 gunthas respectively in the vicinity of Nasarpur (Tando Allahayar) was sanctioned. The Collector states that the planning of the new village will be considered at the time of disposal of the plots.

Nawabshah District.—Lands were acquired in villages of Shahadadpur, Shahpur and Sarhari, taluka Shahadadpur. Plans for the new extension are being drawn up.

Sukkur District.—A town planning scheme for the extension of the town of Shikarpur has been sanctioned and is being proceeded with.

108. *Notified Areas.*—The Notified Area Committees at Jamner, Pachora, Hirekerur, Dhond, Chikodi and Khanapur having been declared Village Panchayats, there remain 30 Notified Area Committees in the Presidency.

The population served by these Committees during the year was 119,483 and the total income from revenue excluding opening balance came to Rs. 2,46,721, giving an incidence of income per head of Rs. 1-1-0.

The following tables show the details of income and expenditure and the combined birth and death rates for notified areas in each district ;—

STATEMENT B.

Income and expenditure of the Notified Area Committees during the year 1922-23.

District.	Serial No.	Names of towns and villages.	Population.	Income including opening balance.	Expenditure.	Closing balance.	Remarks.
				Rs.	Rs.	Rs.	
Broach ..	1	Palej ..	4,323	4,080	2,436	1,644	There are 11 Notified Area Committees in Ahmedabad District and 7 in Thana District which supervised building operations only and they have collected no funds.
Bombay Suburban District.	1	Andheri ..	6,211	75,995	46,926	29,069	
	2	Borivli ..	5,957	19,700	12,825	6,875	
	3	Malad ..	8,520	26,747	18,652	8,095	
	4	Santa Cruz ..	6,092	26,151	24,677	1,474	
	5	Ville Padle ..	7,479	60,792	41,365	19,427	
West Khandesh ..	1	Dondaicha Warwada ..	4,192	2,148	662	1,486	
Nasik ..	1	Manmad ..	7,260	26,386	17,793	8,593	
Sholapur ..	1	Madha ..	4,836	3,938	3,015	923	
	2	Kurduwadi ..	3,618	6,156	4,120	2,036	
	3	Malsiras ..	1,620	1,087	640	447	
Dharwar ..	1	Hangal ..	5,078	1,095	744	351	
Ratnagiri ..	1	Rajapur ..	6,349	23,540	21,775	1,765	
	2	Khed ..	3,842	3,697	2,575	1,122	
	3	Dapoli ..	2,689	6,691	4,614	2,077	
Kolaba ..	1	Karjat ..	2,262	2,853	1,937	916	
Bijapur ..	1	Indi ..	5,028	2,760	1,695	1,065	
	2	Muddebihal ..	4,411	5,104	4,222	882	
	3	Hungund ..	5,563	2,954	2,408	546	
Kanara ..	1	Castle Rock* ..	741	4	..	4	*The Notified Area Committee could not do any useful work for want of funds. The question of local taxation is under consideration.
Sukkur ..	1	Koti Sultan ..	1,696	772	741	31	
	2	Mirpur ..	1,632	1,668	1,092	576	
	3	Ubarao ..	1,716	2,467	1,818	649	
	4	Daharki ..	2,095	2,034	1,347	687	
Nawabshah ..	1	Nawshahro ..	3,400	4,450	4,274	176	
	2	Kandiaro ..	3,013	1,617	1,220	397	
Larkana ..	1	Mehar ..	2,746	15,157	8,923	6,234	
	2	Khairpur Nathan Shah ..	1,484	2,396	2,132	264	
	3	Dadu ..	2,996	5,459	4,798	661	
Hyderabad ..	1	Tando Jam ..	2,634	5,047	2,131	2,916	
	30		1,19,483	3,42,945	2,41,557	1,01,388	

STATEMENT C.

Statement showing by districts combined birth and death rates for Notified Areas in the Bombay Presidency during the year 1922.

Districts.	Number of notified areas.	Ratio of births per 1000 of population.	Ratio of deaths per 1,000 of population.					
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.	
Broach	1	17·81	·00	·00	·00	·00	14·34	
Bombay Suburban District	5	8·75	..	·10	·05	..	10·48	
West Khandesh	1	25·84	..	..	..	..	25·60	
Nasik	1	13·14	..	·08	..	..	11·38	
Sholapur	3	20·92	..	..	..	..	16·67	
Dharwar	1	36·83	..	..	..	·20	24·22	
Ratnagiri	3	31·62	..	·15	..	..	20·64	
Kolaba	1	15·91	2·65	·44	·44	..	25·20	
Bijapur	3	36·32	·40	..	..	..	23·42	
Kanara	1	39·05	..	..	19·85	..	70·15	
Sukkur	4	33·13	..	..	..	..	22·09	
Nawabshah	2	14·81	..	..	·94	..	7·48	
Larkana	3	33·35	..	..	..	..	14·12	
Hyderabad	1	..	..	..	..	..	..	Population not available.

Works of sanitary utility were carried out by Notified Area Committees as follows :—

Manmad.—Six slab storm water drains were constructed and three night-soil carts purchased.

Advice on Public Health matters was given by the Assistant Directors of Public Health to the Notified Area Committees at Khed, Dapoli and Dadu.

109. *Village Sanitary Boards.*—The following statement shews the income and expenditure of Village Sanitary Boards during the year under report :—

STATEMENT D.

Statement showing by Districts the income and expenditure of the Village Sanitary Boards in the Bombay Presidency during the year 1922.

Districts.	Number of Village Sanitary Boards.	Name of Villages.	Popular Contribution.	Total income including opening balance.	Total expenditure.	Closing balance.	Remarks.
			Rs.	Rs.	Rs.	Rs.	
Kanara ..	1	Kandli, Balikop, Hosur } Siddapur ..	1	6	..	6	The work of the Sanitary Board at Siddapur is at a standstill. Popular contributions were not collected since 1920-21 and consequently provisional and local fund grants were not paid since then.
Thana ..	1	Gholwad Bordi ..	534	2,848	1,441	1,407	
Surat ..	1	Chikhali-Samroli ..	384	1,723	786	937	
Poona ..	1	Aundh and Bopodi ..	1,068	..	..	..	Transformed into Village Panchayat.
		Total ..	1,987	4,577	2,227	2,350	

110. *Sanitary Committees.*—During the year Sanitary Committees were newly formed as under :—

Northern Division.—Dehej in Broach District.

Sind Division.—Murad Menon, Munghi Pir, Dursano Charno and Ibrahim Hydri (Karachi) and Jam Hydri in Nawabshah District ; Buthi (Miro Khan) in Larkana District.

Bombay Suburban Division.—Versowa Beach.

During the year 1922, there were 420 Sanitary Committees as compared with 536 in 1921 ; the reduction in the number being due to the establishment of the Village Panchayats.

Detailed information regarding income and expenditure and the birth and death rates for the population under the administration of Sanitary Committees are given by Districts in the following two tables :—

STATEMENT E.

Statement showing by Districts the income and expenditure of the Sanitary Committees in the Bombay Presidency during the year 1922.

Districts.	Number of Sanitary Committees.	Total income including opening balance.	Popular Contribution.	Total expenditure.	Closing balance.	Remarks.
		Rs.	Rs.	Rs.	Rs.	
Ahmedabad	8	9,756	3,323	6,274	3,482	
Kaira	29	40,234	10,299	16,083	24,151	
Panch Mahals	5	11,177	3,091	7,670	3,507	
Broach	28	38,564	8,970	19,701	18,863	
Surat	20	23,352	7,697	16,560	6,792	
Thana	11	24,600	2,919	13,128	11,472	
Total, Northern Division ..	101	1,47,683	36,299	79,416	68,267	
Ahmednagar*	..	..	..	..	..	*Sanitary Committees transferred into Village Panchayats.
East Khandesh*	..	..	..	..	..	Do.
West Khandesh*	2	2,037	337	1,075	962	Do.
Nasik	18	18,451	2,483	4,416	14,035	
Poona*	2	806	162	579	227	*Sanitary Committees have been placed by Village Panchayats.
Satara	..	..	..	..	..	Sanitary Committees abolished.
Sholapur	4	924	57	79	845	
Total, Central Division ..	26	22,218	3,039	6,149	16,069	

Districts.	Number of Sanitary Committees.	Total income including opening balance.	Popular Contribution.	Total expenditure.	Closing balance.	Remarks.
		Rs.	Rs.	Rs.	Rs.	
Belgaum	14	21,097	2,995	7,429	13,668	
Bijapur	13	20,498	3,359	7,659	12,839	
Dharwar	28	23,226	4,477	8,035	15,191	
Kolaba	29	11,816	1,642	4,855	6,961	
Ratnagiri	2	1,646	668	1,060	586	
Total, Southern Division ..	86	78,283	40,141	29,038	49,245	
Karachi	41	34,516	6,247	15,110	19,406	
Hyderabad	39	37,067	7,399	18,051	19,016	
Sukkur	16	14,405	4,080	8,811	5,594	
Larkana	47	28,602	7,183	18,319	10,283	
Nawabshah	26	38,734	6,876	20,143	18,591	
Thar and Parkar ..	26	35,914	6,901	16,217	19,697	
Upper Sind Frontier ..	11	17,275	4,052	11,659	5,616	
Total, Sind ..	206	206,513	42,738	108,310	98,203	
Bombay Suburban District ..	1	1,022	714	649	373	
Grand Total ..	420	455,719	122,931	223,562	232,157	

STATEMENT F.

Statement showing Combined Birth and Death rates for Sanitary Committees in the Bombay Presidency during the year 1922-23.

Districts.	Number of Sanitary Committees.	Rates of Births per 1000 of population.	Rates of Deaths per 1,000 of population					Remarks.
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.	
Ahmedabad	8	25·84	·00	·04	·00	·00	20·73	
Kaira	29	31·10	·00	·00	·00	·00	21·13	
Panch Mahals ..	5	37·95	·00	·34	·00	·00	21·47	
Broach	28	35·22	·00	·02	·00	·00	21·32	
Surat	20	39·97	·00	·06	·56	·00	24·42	
Thana	11	28·22	..	·11	·53	..	19·82	
Ahmednagar*	..	..	..	..	..	..	..	* Transformed into Village Panchayats.
East Khandesh* ..	..	..	..	..	..	..	..	
West Khandesh* ..	..	..	..	..	..	..	..	
Nasik	18	36·97	..	..	..	..	28·38	
Poona	2	31·14	..	..	..	..	15·99	
Satara†	..	..	..	..	..	..	..	† All Sanitary Committees have been abolished and the Village Panchayat Committees have been established in their places.
Sholapur†	..	32·37	..	..	..	..	22·97	
Belgaum	14	38·55	1·23	..	1·60	·02	25·64	
Bijapur	13	34·83	1·32	..	·13	..	23·86	
Dharwar	28	39·17	·61	·06	1·74	·08	24·94	
Kolaba	29	36·37	·11	·07	·02	..	22·69	
Ratnagiri	2	26·35	..	..	..	..	22·87	
Karachi	41	16·93	..	·03	..	..	14·05	
Hyderabad	39	30·47	..	..	..	..	24·18	
Sukkur	16	34·37	..	..	..	..	18·72	
Larkana	47	22·50	..	..	..	..	14·86	
Nawabshah	26	35·49	..	·09	·13	..	18·61	
Thar and Parkar ..	26	21·70	..	..	..	..	17·97	
Upper Sind Frontier ..	11	24·85	..	..	..	..	17·47	
Bombay Suburban Distt.	1	19·87	..	..	4·24	..	12·94	

The Assistant Directors of Public Health visited 42 Sanitary Committees' Areas.

Examples of useful work done by some of these bodies are as follows :—

The Bolthan Committee spent Rs. 321 on repairs to drains. Karanja engaged a sweeper, Belapur and Rahuri (Ahmednagar District) repaired roads and gutters. Jamkhed (Ahmednagar District) removed prickly-pear growth. Annegeri, Mishrikotti, Kalghatgi, Bankapur and Devihosur improved the roads to an appreciable extent. Shelvadi spent Rs. 37-8-0—for removing prickly-pear. Aladkatti improved the water-supply by deepening a tank. Wahilad Guhar (Larkana District), while Kolir and Halla (Hyderabad District), repaired wells.

SECTION X.

GENERAL REMARKS.

Public Health Laboratories.

111. The Poona and Karachi Public Health Laboratories continued to do valuable work. The establishment of a third Laboratory at Ahmedabad has been administratively sanctioned by Government and it is hoped that it will be started next year.

Dr. K. A. Gandhi, D.P.H., was in charge of the Poona Public Health Laboratory up to 9th September 1922 when Dr. J. L. Pinto, D.P.H., took over charge.

The work of the Laboratory consisted principally in carrying out daily bacteriological and chemical analyses of samples of water supplied to Poona and Kirkee and in estimating the correct quantity of bleaching powder required at the Poona, Pashan and Kirkee water works for the efficient chlorination of the water on each successive day.

The water supply of Poona and Kirkee is obtained from three sources of which the most important is the Khadakwasla Lake supplying Poona Cantonment and Civil Lines and the City. Kirkee Cantonment obtains its supply from the Pashan Lake (which is situated about 3 miles to the west of the Cantonment) except during the monsoon months when the Mula river water is utilized as a substitute for the Pashan water.

The Khadakwasla water before delivery to the Poona Civil Lines and Cantonment is passed through a very efficient rapid filtration plant, and then chlorinated, a high standard of purification being maintained throughout the year. Two new filters were added to the installation during the year, the total filter capacity of the plant per hour being increased to 130,000 gallons.

In the case of the Poona City supply which is obtained from the same sources the water is chlorinated only the correct dosage being controlled by the Public Health Laboratory. The standard of purity of this water falls short of that of the Camp supply, but it is hoped that in course of time a rapid filtration plant will be installed here also.

The Pashan water passes through old sand filters before chlorination, very satisfactory results being obtained, while the Mula river supply, which is used during the monsoon months only undergoes treatment similar to that of the Poona Cantonment water, a high degree of purification being obtained in this case also.

During the year 2,734 samples were examined bacteriologically and 2,521 chemically.

In addition to this routine examination of local water-supplies, the laboratory carried out examination of 137 out-station samples.

Eight hundred and eighty-eight bleaching powder estimations were carried out for local supplies and 23 for out-stations.

The Karachi Public Health Laboratory was in charge of Dr. Barretto, D.P.H.

A daily bacteriological and chemical examination of the Karachi water supply has been carried out throughout the year.

The chlorinated water gave fairly satisfactory results for the first six months of the year, but in the months of July, August and September owing to floods and rain the standard fell off, the quality of the water shewing considerable variation from day to day.

The installation of an up-to-date and efficient filtration and chlorinating plant would be a valuable addition to the extensive water-system of Karachi.

In the case of Hyderabad also the need for a filtration plant is obvious. Only 6 samples of these waters were sent to the laboratory for examination during the year. The results obtained were not good and though, it is hoped that the recent construction of 6 new settling tanks will improve the quality of the water, a filtration plant should be included as early as practicable.

During the year 456 samples were examined bacteriologically and 266 chemically at the Karachi Public Health Laboratory.

Other work performed by the laboratory consisted of the analysis of food-stuffs including 35 samples of ghee examined for the Karachi Municipality, 21 of which or 60 per cent. were found to be non-genuine ; 33 samples of milk and the following miscellaneous investigations :—

Typhoid Carriers	23
Blood cultures	7
Throat swabs	3
Stools for Anklylostomia	23
Ice Cream	2
Beer	4
Butter	1
Bread	1
Colouring matters	2
Total ..	66

Fairs and Festivals.

112. The chief day of the *Ashadhi Fair* fell on 5th July 1922. The number of pilgrims totalled 1,47,378 including 5,691 free passes.

The fair passed off without any mishap. No case of cholera or other serious epidemic disease occurred. The total mortality from all causes reported during 11 days of the Festival was only 30 which is equivalent to an annual death-rate of less than 6 per mille for the whole population at stake. Though this is a low figure, suggesting an under-estimate it is probably fairly accurate, karkuns for house-to-house visitation to detect cases of illness being included amongst the special establishment employed. In any case, it indicates that health conditions were unusually good.

Dr. da Gama, Assistant Director of Public Health, ascertained and sent out the usual list of halting places of Palkhis with dates to the Surgeon General and to Collectors and Native State authorities through whose areas palkhis were to travel. Medical Officers of dispensaries along the routes were thereby enabled to inspect the passing palkhi. The reports received shew that no outbreak of disease occurred.

The Saswad (Sopankaka's) Palkhi intimated a change of itinerary for this and future years starting four days earlier to allow of extra halts.

Six Sub-Assistant Surgeons and eighteen medical students were engaged for the festival, the Cholera Hospital being in charge of Dr. G. M. Kurulkar. A Sub-Assistant Surgeon was sent to Malsiras to meet the Alandi Palkhi on its way to Pandharpur. All fair arrangements were completed in good time.

Six qualified Sanitary Inspectors and the usual staff of sweepers, scavengers, etc., were also entertained.

As per Government Order No. 31 of 21st April 1923, the question of an adequate and pure water-supply for pilgrims travelling on the Alandi-Pandharpur route and the protection of wells at the various halting places is in course of preparation by the Sanitary Engineer to Government in consultation with the Director of Public Health.

At the *Kartiki Fair* at Pandharpur which is next in importance to the Ashadhi, the average attendance was somewhere between 80,000 to 1,00,000. There was only one palkhi (from Barsi) during the fair. The staff engaged included 7 Sub-Assistant Surgeons, 3 Sanitary Inspectors and 100 Bhangis.

Alandi.—The fair (*Kartiki*) was held on 15th November 1922. Of 70,000 pilgrims who attended the fair, 1—10th were excused tax being poor, blind, etc. The income derived from the pilgrim tax amounted to Rs. 16,000.

Senior Medical students were entrusted with the duty of inspecting the incoming and outgoing pilgrims, a special student being deputed to inspect the pilgrims in the town itself. No infectious cases were detected.

The Municipal Infectious Diseases Hospital equipped with all necessary medicines and a staff of senior medical students, ward-boys and Ayas was ready to deal with any possible outbreak.

Special difficulty was experienced with the drinking water, heavy rains a few days before the fair having made the main source of water very turbid. However, the construction at the Poona Laboratory of an arrangement for maintaining a constant flow of bleaching powder and regulating the dosage secured very satisfactory results. No complaint was made by the people regarding taste or smell and no cases of sickness occurred.

Yellamma Fair (15,000) was held in January, *Gokarn Fair* (10,000) in February and *Yamnur Fair* (20,000) in March. The figures show the approximate number of pilgrims that attended each fair. All these fairs were visited by the Assistant Director of Public Health, Southern Registration District, the sanitary arrangements being supervised by him, assisted by the local Inspectors. Water-supplies were treated with permanganate of potash. There was no outbreak of infectious disease, nor were these fairs responsible for any epidemic elsewhere.

The *festivals at Vautha* in Dholka Taluka and *at Shukaltirth* in Broach Taluka were held from the 3rd to 5th November 1922 at which 10,000 and 35,000 pilgrims assembled respectively. The services of the Inspectors of Sanitation and Vaccination were in each case at the disposal of the District Officers for the fairs concerned.

Lal Shahbaz Fair at Sehwan took place from 17th to 19th April 1922, the Assistant Director of Public Health, Sind Registration District, visiting the fair. The sanitary arrangements as reported by him were satisfactory and no epidemic disease appeared.

Sanitary Associations.

113. There were 8 Sanitary Associations working in the Presidency. All continue to do useful work as the following examples show :—

Karachi Association.—The work of this Association is entrusted to 2 Lady Health Visitors and 6 qualified midwives.

During the year under report 881 maternity cases were treated by the staff of the Association as compared with 845 in the previous year. Of these, 71 were difficult labour cases. In all 7 cases proved fatal, 3 being due to eclampsia, and 3 to sepsis while the seventh was complicated by an attack of Influenza.

The " Creche " or day nursery established in Karachi showed a marked increase in attendance during the year under report as compared with the preceding year, the numbers of children who attended being 13,331 and 6,941 respectively.

The Association has applied to Government for a grant to start a Maternity Home in the old town quarter. In the meantime, the Municipality at Karachi sanctioned a donation of Rs. 300 annually towards this object and the Managing Committee have decided to open a Maternity Home forthwith in Bherumal Thakurdas Town Hall for benefit of the people inhabiting the old town, Machi Miani, and other adjacent quarters.

Broach Sanitary Association arranged two small Health shows in the city and four in the district. In these shows, charts illustrating various sanitary subjects were exhibited and explained to the people. Lectures on cholera, malaria, plague and tuberculosis aided by lantern slides and charts were delivered in the different parts of the city. A class for giving instruction in " First Aid " to the teachers of the Primary Training School was opened, a similar class being conducted for the High School boys at the R. S. Dalal High School premises. Ninety-four candidates in all attended the class. The Association published a " Gujarathi " translation of " Short Notes on Hygiene " and continued to maintain three shops in the city for the sale of pure milk where about 2,900 maunds of milk were sold at a moderate price.

Ahmedabad Sanitary Association secured the services of Dr. Chunilal M. Parikh, M.B.,B.S., for the purpose of delivering lectures on personal Hygiene and Sanitation. Teachers and students of Municipal Primary schools as well as of the National Schools were enthusiastic in hearing Dr. Parikh's lectures which were accompanied by charts. Over 100 schools including more than 15,000 children took advantage of these lectures.

The Association also appointed Dr. Parikh as their Health Visitor.

This Sanitary Association makes the following suggestion in their report which is worthy of note and which the Assistant Director of Public Health, Guzerat Registration District, fully endorses :—

"The Association thinks that the sanitation of the town could be much improved if a higher degree of sanitary conscience could be acquired by the municipal magistracy, officials and councillors. Small fines timely imposed on responsible individuals who create nuisances would do much to remove the present insanitary conditions."

The Sanitary Association started at Nadiad four years back ceased to operate for want of funds and workers.

The Dharwar Sanitary Association.—Two Sub-Assistant Surgeons were placed at the disposal of the Association free of charge. The Sub-Assistant Surgeons gave 127 Magic Lantern demonstrations in the different parts of the Dharwar District and their lectures were appreciated by the villagers. The Association carried out quininization in the schools at Alur, Hangal, Dambal and Andalgi. The Association also distributed free of charge 1,561 quinine tabloids and sold 3,500 more at cost price.

Surat, Viramgam and Poona and other Sanitary Associations also did very useful work towards educating the public in Health matters.

Medical Inspection of Schools.

114. The Medical Inspection of Schools begun in 1921 was continued up to 31st July 1922 when the appointments of the Inspectors were terminated. A tabulated result of the medical examination of children examined during 1921 was given in the Annual Report for that year and was fully commented on.

As the figures form a valuable record of the incidence of minor ailments and of chronic disabilities and defects amongst the growing populations, a complete table of all examination made while the scheme lasted (July 1921 to 1st August 1922) is appended.

Six Inspectors were employed. They visited 96 schools and examined 14,727 children out of a possible total of 16,060. Among these no less than 12,110 cases of disease or deformity were detected.

Defective eyesight accounted for 1,971 of the total enlarged tonsils for 1764, Diseases of Malformation for 1,417 and Malnutrition for 1,317.

There were 958 cases of Skin Disease, 564 of Enlarged Glands, 519 Eye Diseases as distinct from defective vision and 460 Physical Deformities truly a lamentable record of juvenile disability.

Under various headings the following Districts and Town Circles are noticeable for their high percentage of defectives :—

Defective Eyesight.—Kaira, Ahmedabad Town Circles, Karachi Town Circle and Bombay City.

Enlarged Tonsils.—Thana, Dharwar, Bijapur, Kanara, Hubli, Karachi and Hyderabad.

Diseases of Malformation.—Surprising figures were obtained under this and the allied heading "Physical Deformities" in Sind. No less than 853 of the 1,685 children examined or 1 boy in 2 showing some deformity or malformation as will be seen from the following figures :—

	Examined.	Physical Deformities.	Other Malformation.
Karachi	48	4	33
Nawabshah	54	6	37
Upper Sind Frontier	115	17	59
Karachi T. C.	687	98	319
Shikarpur „	127	34	71
Hyderabad „	469	96	226
Larkana „	185	43	108
	1,685	298 or 18 per cent.	853 or 51 per cent.

For Bombay City the corresponding figures were 1,650,84 and 160 respectively.

Malnutrition—Karachi and Hyderabad Town Circles give conspicuously high figures under this heading also.

Of the 687 boys examined in the former town 31 per cent. and in the latter of 469 boys examined 34 per cent. were more or less ill-nourished.

In Bombay City on the other hand, 91 only out of 1,650 examined (5·51 per cent.) showed signs of neglect.

Tuberculosis.—The number of cases of Enlarged glands detected was remarkably low, the highest percentage being on the Upper Sind Frontier and in Hyderabad and Karachi Town Circles. The death-rate from phthisis among adults in Hyderabad Town Circle is high (2·82). In other areas, which return a consistently high mortality from this cause, namely, Ahmedabad Town Circle, and Ratnagiri District practically no cases of Enlarged glands were discovered.

Enlarged Spleens.—High indices were found in Larkana District 23·2 and Thana 21·0. In other malarious tracts such as Kanara and East Khandesh practically no enlargement was discovered.

It is unfortunate that the work had to be closed down so soon, and it is to be hoped that before long it may be possible to continue these inspections. It is plain from the little done so far that the school-children in parts of the Presidency stand in great need of medical attention. The value of these examinations would be increased by a more detailed classification into age—periods, castes and so on.

STATEMENT G.

Tabulated results of Medical Inspection of School-children.

Name of Districts and Towns.	1	2	3	4 Inberculosis.			5 Eyes.		6	7 Teeth.		8	
	Number of Schools.	Number of boys present.	Number of boys examined.	(a) Diseased lungs.	(b) Enlarged glands.	(c) Diseased bones or joint.	(a) Defective eye-sight.	(b) Diseases of eye.	Defective hearing.	(a) Two or more decayed.	(b) Sepsis.	(a) Adenoids.	(b) Enlarged Tonsils, c
Ahmedabad ..	2	229	238	..	..	..	44	11	4	13	2	1	1
Panch Mahals ..	1	286	235	..	..	..	40	12	1	7	..	1	13
Kaira ..	4	866	959	1	..	..	210	73	12	25	2	8	57
Broach ..	3	566	575	..	..	..	77	5	9	34	..	4	12
East Khandesh ..	4	625	612	..	..	..	73	7	3	1	..	..	1
Nasik ..	2	530	530	2	5	..	79	28	12	4	19	2	19
Ahmednagar ..	2	110	110	..	..	..	4	2	..	4	..	..	2
Sholapur ..	3	797	738	..	..	..	61	6	7	5	..	..	1
Poona ..	4	248	236	..	..	..	16	1	..	8	..	..	1
Thana ..	5	490	524	2	10	..	51	14	22	14	14	3	53
Kolaba ..	1	47	47	..	..	..	1	3	1	.. 1	3	..	..
Ratnagiri ..	2	313	308	1	5	..	25	15	9	11	10	1	28
Dharwar ..	5	723	723	..	5	1	28	24	..	17	4	..	103
Bijapur ..	2	461	461	1	3	..	28	10	2	5	..	2	92
Kanara ..	7	876	876	..	5	4	32	10	5	45	..	6	137
Karachi ..	1	81	48	..	21	..	7	4	6	6	4	..	28
Nawabshah ..	1	54	54	..	19	..	6	6	9	7	10	2	33
Upper Sind Frontier ..	1	111	115	..	49	..	25	11	14	16	16	..	65
Ahmedabad T. C. ..	13	2,607	2,518	2	1	..	554	122	35	58	17	74	18
Dhulia ,, ..	3	574	564	1	..	..	41	6	5	3	..	..	5
Belgaum ,, ..	3	381	424	..	..	..	9	6	..	17	..	1	63
Hubli ,, ..	3	714	714	..	6	..	40	13	..	15	..	2	162
Karachi ,, ..	5	1,549	687	3	191	2	169	47	87	119	51	2	296
Shikarpur ,, ..	2	245	127	3	1	..	30	9	14	22	27	..	61
Hyderabad ,, ..	6	642	469	3	159	1	68	26	65	81	100	..	215
Larkana ,, ..	3	346	185	2	49	..	45	11	9	18	28	..	92
Bombay City ..	8	1,589	1,650	6	35	3	208	37	56	342	99	80	206
	96	16,060	14,727	27	564	11	1,971	519	388	898	406	189	1,764

STATEMENT G—*continued.*

Name of Districts and Towns.	9 Enlarged spleen. (a) Not extending below rib margin.	(b) Greater enlargement.	(c) Splenic Index.	10 (a) Physical deformities.	(b) Other diseases of malformations.	11 (a) Mental deficiency.	(b) Nervous defects.	12 (a) General debility.	(b) Malnutrition.	13 Heart diseases.	14 Skin diseases.	15 Unprotected against small-pox.	
Ahmedabad ..	..	27	11·3	3	4	..	1	..	30	..	2	..	It is not clear whether same of the Inspectors did not include boys with small-pox marks as unprotected *i.e.*, invaccinated.
Panch Mahals ..	..	6	..	2	..	..	1	..	22	..	5	..	
Kaira ..	..	14	..	9	4	..	6	..	86	..	43	1	
Broach ..	..	1	..	1	2	..	2	..	52	..	11	..	
East Khandesh ..	1	..	..	3	4	..	..	..	7	..	33	2	
Nasik ..	..	..	..	4	..	..	..	..	..	..	13	..	
Ahmednagar ..	..	..	..	..	..	..	..	..	6	..	9	2	
Sholapur ..	1	..	..	5	13	..	..	..	34	..	50	2	
Poona ..	5	..	..	1	6	..	..	..	8	..	12	1	
Thana ..	16	3	21·0	4	5	1	15	..	44	2	39	2	
Kolaba ..	..	..	..	1	..	..	1	..	..	..	2	..	
Ratnagiri ..	2	1	..	3	..	..	4	..	1	1	27	3	
Dharwar ..	..	..	..	4	75	..	..	..	40	..	47	57	
Bijapur ..	..	..	..	2	18	1	..	..	21	..	36	23	
Kanara ..	..	6	..	11	165	..	1	..	62	..	158	83	
Karachi ..	4	17	..	4	33	..	..	..	28	..	..	11	
Nawabshah ..	2	2	..	6	37	..	..	..	22	..	2	17	
Upper Sind Frontir ..	10	9	..	17	59	..	..	..	56	..	11	33	
Ahmedabad T. C. ..	3	21	·95	19	10	..	6	152	134	3	146	13	
Dhulia „ ..	1	1	..	1	11	..	..	..	17	..	35	5	
Belgaum „ ..	..	..	..	..	31	..	26	..	20	..	30	5	
Hubli „ ..	..	1	..	5	56	..	..	..	74	..	92	42	
Karachi „ ..	1	4	..	98	319	4	4	..	214	..	27	71*	*24 suffered from small-pox 22-
Shikarpur „ ..	1	3	..	34	71	1	..	..	31	..	7	33†	†22 do.
Hyderabad „ ..	8	6	..	96	226	1	..	..	163	..	17	100‡	‡82 do.
Larkana „ ..	18	25	23·2	43	108	..	2	..	54	..	11	36§	§20 do.
Bombay City ..	45	23	4·12	84	160	1	35	..	91	2	93	118	
	118	170		460	1,417	9	104	152	1,317	8	958	660	

BOMBAY DEVELOPMENT DIRECTORATE.

115. The Assistant Director of Public Health, Western Registration District writes:—The year 1921-1922—the second year of the Development Department and Development Directorate—has been marked by a steady progress and although the set-backs inseparable from the initiation of a project of such magnitude have been met, it may fairly be said that the bulk of the difficult preliminary work has been accomplished.

The following schemes are concerned with the Western Registration District:—

I. Salsette Scheme.

II. Salsette Trombay Railway.

III. Bombay Suburban Survey.

Salsette scheme comprises several schemes relating to development of large tracts of land (*i*) as residential areas and (*ii*) as sites for industrial concerns.

The development is carried out by two methods (*a*) under the Town-planning Act and (*b*) by direct acquisition and subsequent development.

During the year, three Town Planning Schemes were finished which, with the two schemes, completed in 1920-1921 brings the total number to five. There are altogether 15 Suburban Schemes, involving an area of 15,325 acres at various stages of development.

Ambernath Scheme (a new industrial scheme) aims at the provision of a new industrial township with a water-supply independent of the Bombay system.

About 18 lakhs of square yards of land adjoining the south-east line of the G.I.P. Railway near Ambernath Station will be available for actual factory sites and ample land is reserved for housing all persons employed in the factories. The first three factories are under construction, two of them being practically completed by end of March. Provision has been made for roads, drainage and water-supply. In order to ensure a permanent supply of water, it is proposed to construct a barrage, with automatic gates, in the Ulhas river near Badlapur, with pump house and filtration, the water will be pumped through a steel rising main, for a distance of $2\frac{1}{2}$ miles to a reservoir situated 200 feet above H. S. L. from which point it will be delivered to the industrial area by gravity.

The scheme of development provides, in addition to a filtered water-supply for the installation of a modern sewage disposal system, and all necessary preliminaries have been completed in connection with this.

The main result of these activities (of the Development Directorate) concerning Public Health, is the large number of Labour Camps which have sprung up in various places. Labour is attracted to these works from all parts of the country and the danger of epidemic diseases both breaking out and spreading from these camps is ever present. It is, therefore, essentially necessary in the interest of Public Health to appoint a District Health Officer equipped with a proper staff as approved of in Government Order, General Department, No. 2923, dated the 22nd July 1922 for the Bombay Suburban Division under the Assistant Director of Public Health, Western Registration District, for the proper registration of vital statistics and control of epidemic diseases in the Development Area.

Industrial Workers.

116. By Government Notification, General Department, No. 2804, dated the 23rd November 1922, Officers of the Public Health Department have been given powers of inspection under the Indian Factory Act, 1911.

The Assistant Directors commenced a routine inspection of the various factories in their charges with a view of enquiring into the existing sanitary conditions and making necessary recommendations for their improvement. This work is only just commencing, but already it has become apparent that much requires to be done to bring the sanitation of these workshops up to anything like a passable standard.

Much valuable information should be obtained regarding the conditions under which the workers labour throughout the Presidency and the effect of these conditions upon their health.

For this purpose some knowledge of the vital statistics of the workers is necessary. The Assistant Director of Public Health, Western Registration District, has drawn up and forwarded to the Collectors in his Registration District a scheme for recording vital statistics in workshops and the scheme is now in progress of development. Such statistics can only be obtained at present when the workers live on or near the premises.

In 1921 Doctor (Mrs.) F. D. Barnes, M.D., W.M.S., belonging to the Council of the Countess of Dufferin's Fund was appointed under the Director of Public Health to give aid and advice to factory women in the Bombay City. She visited almost daily one or other of the groups of mills more especially those where Maternity Benefits exist, *viz.*, the Tata and the Currimbhoy group of mills in Bombay.

As regards mills in Bombay City, Mrs. Barnes points out that there is an urgent need for 'Creches' at the mills where women operatives are engaged. 'Creches' when built should be in charge of a fully qualified nurse, a nurse specially trained in children's diseases. She also advocates the great need of establishing hospitals exclusively for the use of industrial workers. The majority of mills engage a male doctor only, but one group, the Tata, employs a lady doctor for its women industrial workers. The doctors so engaged are not whole-time doctors. Mrs. Barnes recommends establishing an Industrial Health Bureau, an Industrial Medical Service, and Medical Dispensaries.

Owing to financial stringency unfortunately her enquiry had to be terminated before completion.

An All-India Industrial Welfare Conference was held in Bombay on the 6th, 7th and 8th April 1922. Dr. R. V. Shiveshwarkar and Dr. A. da Gama attended the Conference as delegates from this Department and read papers.

Dr. (Mrs) F. D. Barnes also attended the Conference and read a paper on "Problem relating to working mothers and infants".

PERSONAL PROCEEDINGS.

117. The activities of the Officers in charge of the Public Health Laboratories are detailed above.

The Assistant Directors of Public Health visited 774 towns and villages during the year and made reports on many.

In the Western Registration District, Lieut.-Colonel J. H. McDonald, M.B., C.M. (Ed.), I.M.S., was in charge of the office from 1st January to 31st May 1922 and Dr. Jamshyd Munsiff, D.P.H., from 1st June to 31st December 1922. The Assistant Director of Public Health gave advice in public health matters in 10 towns and visited 19 towns for general sanitary purposes and 106 for vaccination. Remarks were entered by him in 9 Village Sanitary Inspection Books while the Inspectors of Sanitation and Vaccination wrote in 24 books. He attended the Secretariat to give evidence before the Retrenchment Committee in December 1922.

The office of the Assistant Director of Public Health, Guzerat Registration District, was held by Dr. R.V. Shiveshwarkar, B.A., M.B.B.S., D.P.H., throughout the year. He gave advice on public health matters in 19 towns and visited 29 towns for general sanitary purposes and 122 for vaccination. 14 Village Sanitary Inspection Books were written up by him personally and 89 by the Inspectors of Sanitation and Vaccination. 9 Rain gauges and 11 dispensaries were also inspected by the Assistant Director.

Dr. R. D. Dalal, held charge in the Southern Registration District throughout the year. He gave advice in public health matters in 14 towns and visited 82 towns and villages for general sanitary purposes and 113 for vaccination. He visited Yellamma and Yamnur Fairs. Remarks were entered by him in 7 Village Sanitary Inspection Books, while the Inspectors of Sanitation and Vaccination wrote in 109 books.

Dr. Accacio da Gama was in charge of the office of the Assistant Director of Public Health, Central Registration District, up to 14th November 1922 when Dr. J. L. Pinto, D.P.H., took over. He gave advice to 9 towns and visited 23 towns for general sanitary purposes and 95 for vaccination. He attended the fairs at Pandharpur, Alandi, Chinchwad and Shirala.

He visited Satara town in connection with the installation of a septic tank, Mahableshwar to enquire into the outbreak of plague, Lonawla to give instructions about inoculation and Kedgaon to inspect the sanitary condition of the Mukti Mission House. He wrote remarks in 2 Sanitary Inspection Books and 52 Sanitary Inspection Books were written by the Inspectors.

Dr. J.L. Pinto, D.P.H., was in charge of the office of the Assistant Director of Publice Health, Sind Registration District, up to 26th August 1922 when Lieut.-Colonel H. M. H., Melhuish, D.S.O., I.M.S., took over. He gave advice to 24 towns in public health matters and visited 7 towns for other sanitary purposes and 134 for vaccination purposes. He also inspected 11 dispensaries and 11 Rain gauges. He delivered 20 lectures to senior medical students of the Hyderabad Medical School. Similar lectures were also given by Drs. da Gama and Shiveshwarkar at the Medical Schools at Poona and Ahmedabad.

The office of the Director of Public Health for the Government of Bombay was held by Lieut.-Colonel W. O'S. Murphy, I.M.S., throughout the year. During the year 26 towns were visited in connection with inspection of water-supplies, drainage and for general sanitary purposes. He attended the Secretariat in Bombay to give evidence before the Retrenchment Committee in December 1922. He was also present at the Chaitri Fair at Pandharpur and at the *Kartiki Fair*, Alandi, in November.

H. MELHUISH,
Lieut.-Colonel, I.M.S., D.P.H.,
Acting Director of Public Health.

Poona, 30th July 1923.

APPENDIX I.

Annual report of the Sanitary Board, Bombay Presidency, for the year 1922.

During the year under report there was no change in the constitution of the Board.

2. Three meetings were held and the following subjects were dealt with.

(1) Proposal to join the Cantonment drainage to the Poona Drainage outfall sewers.

(2) Financial forecasts of water supply and drainage schemes and charges for house connections.

(3) The advanced curriculum for qualified medical men to befit them for posts of medical officers of health in 2nd class Municipalities.

(4) The procedure to be followed regarding grants-in-aid to local bodies from amounts placed at the disposal of the Sanitary Board.

(5) Classification of Municipalities for purposes of employment of health officers as affected by the Census of 1921.

(6) The Poona City Municipality's proposals in respect of the financing of the Poona Drainage Remodelling Scheme.

3. Owing to financial stringency no funds were placed at the disposal of the Sanitary Board for distribution to minor sanitary schemes.

4. (*a*) The detailed preparation of plans and estimates for the following scheme was sanctioned.

1. Shikarpur partial Drainage scheme.

(*b*) The Board considered the financial aspect of the following fair projects and recommended Government to give a grant-in-aid of 50 per cent. of the cost of the scheme.

1. Godhra Water Supply.
2. Sukkur Water Supply.

In the case of Viramgam Water Supply, as the source of supply is a successful bore put in at Government cost, the Board declined to recommend a grant-in-aid of more than 25 per cent. of the cost of distribution.

5. The principal items of progress in connection with *water supplies* were as stated below:—

Sind.

Karachi.—The 30″ reinforced concrete pipe conduit at Dumlotte has been completed and also a dry wall gallery 600 feet long under the river bed. This additional work is at present supplying Karachi with about 10 lakhs gallons of water per day. New water mains were provided in Runchore lines Sadar Bazar and Frere town quarter.

Hyderabad.—The work of installing new pumping plant at Gidu and the Fort Lift was continued. At Gidu Lift the erection of one Davy Paxman Boiler with super-heater, etc., complete, and a Sisson Engine with pump venturi meter and suction pipe was completed.

Sukkur.—The principal items under construction were as under:—

(1) New pumping plant.
(2) Filtration plant.
(3) Engine house, Pump pit and pure water reservoir.
(4) 15″ rising main and other pipe work.

Northern Division.

Ahmedabad.—A supply well was added to increase the supply. Water mains of 6″, 4″ and 2″ diameter to a length of 3,100 feet were laid in Kapasia Bazar, Rajpur, Gomtipur, Hirpur and in lanes of the City. These works were carried out by the Municipality without Government aid.

Surat.—The existing 21″ connecting pipe between the supply well and the inlet well about 400′ in length was found to be out of level and not discharging fully. A new 24″ main to supplement this is being laid alongside it about a foot lower in level, in accordance with the Sanitary Engineer's advice. The work is in progress under contract.

Central Division.

Ahmednagar.—The work of sinking an infiltration well and erecting an Engine House and laying a 15″ main 2,000′ in length for utilising the percolation water from the Pimpalgaon Dam is in progress.

Barsi.—A supply main was laid for a short distance. Further work was stopped for want of funds.

Poona.—A new boiler pump house and intake culvert from the river Mula for the Holkar's Bridge Water Supply were constructed.

Water mains were laid and fire hydrants fixed on the new Koregaon Estate between the River and the G.I.P. Ry. line, Poona.

Two units were added to the Paterson Filter installation of the Poona Cantonment Water Supply.

The bye-pass channel in the City Settling tanks was completed with the exception of the roof.

Trimbak.—Some minor works for completing the Water Supply works were carried out.

SOUTHERN DIVISION.

Hindalgi Jail Water Supply.—The construction work was taken in hand in August 1922. The rising main, distribution mains, Service Reservoir, etc., were partly constructed.

6. The principal items of progress in connection with *Drainage Schemes* were as under:—

SIND.

Karachi.—New 7″ sewage mains were laid in the Frere Town and in Ramswami Quarters in connection with the development of Municipal land for building purposes. The work of erecting a new air compressor was completed. The sinking of new 500 gallon Ejectors in duplicate at Nos. 3 and 4 was completed and the ejectors put to work.

CENTRAL DIVISION.

Sholapur.—A combined drainage scheme for the King Edward Memorial Hospital and head-quarter Police lines was in progress. A 9″ cast-iron main to the head-quarter Police Lines was laid and connected with the septic tank which was also constructed during the year. Flushing latrines of 40 seats for the Head Quarter Police Lines were constructed and joined with 6″ Cast Iron branch line to the 9″ main. Four flushing tanks and ventilating shafts were completed and building connections were made.

SOUTHERN DIVISION.

Hindalgi Jail.—A few sewer lines were laid; the work is in progress.

7. Several schemes were under investigations. Survey work in connection with the combined Poona drainage remodelling scheme for Poona City, Bhamburda, Suburban Municipality, Railway Area and Cantonment was carried out and plans and estimates for a complete scheme are under preparation; negotiations are going on with the different authorities for settling terms under which their sewage will be admitted into the gravitation outfall sewer from the City.

8. The progress of boring operations in the Presidency was as under:—

Bavla.— The second bore of 8″ diameter, in progress was taken from 429 feet to a depth of 720 feet. At this point an artesian supply of sweet water was met with which flowed at the rate of approximately 77,000 gallons per day.

Dharasna.—A 3½″ bore was in progress and reached a depth of 48 feet only.

Kotri.—A 3½″ bore was taken in the distillery well with a view to improve the water supply. The boring reached a depth of 200 feet where lime stone was met with; further boring was stopped as there was no sign of increase of the supply.

Gogha.—This bore was deepened from 812 to 1,016 feet; at 1,000 feet a small supply of salt water was found. Further boring was attempted in order to pass this strata with the hope of getting sweet water but the shoe of the pipe was damaged and the work stopped for the time being.

Karachi.—A B. F. Type plant was sent to Karachi at the request of the Commissioner in Sind for an experimental deep boring. The site selected was near Drigh Road. A 10″ diameter bore was put down to a depth of 65 feet.

Malir Borings.— Nineteen additional borings ranging from 70 ft. to 90 ft. in depth were made in connection with the investigations of subsoil conditions of the Malir River valley for the purpose of extending the water supply conduit towards Dumlottee. The existence of an underground supply sufficient for the needs of Karachi was demonstrated.

Nadiad.—The 10″ bore was taken from 820′ to a depth of 1,070 feet with 8″ casing. At a depth of 1,044 feet a small supply of potable water began to flow. The piping could not be driven further due to hard sticky clay. The size of the bore was reduced to 6″ and it was taken to a depth of 1,170′, at which point an artesian supply of sweet water was met with and is flowing at the rate of 1,15,200 gallons per day at the ground level.

Rohri.—Seven borings from 50 feet to 70 feet deep were made in connection with the investigation of rock foundation and also to ascertain the water bearing stratum for water supply scheme at Rohri.

Sukkur.—A G. O. Plant was used in connection with ascertaining the underground condition for Sukkur Water Supply.

Sanand.—A 9″ bore was continued from 135′ to 755 feet. At 712 feet an artesian supply of sweet water was met with but the boring was continued further and at 752 feet a flow of 80 gallons per minute was struck. The bore was clogged due to clay and the flow was reduced to 12 gallons per minute.

Three shallow bores for North-Western Railway workshop near Karachi.— A $3\frac{1}{2}$″ boring near Malir River bridge in connection with the proposed water supply scheme for Railway Workshop was taken to depth of 51 feet. The work is in progress.

9. During the year under report the Sanitary Engineer carried out tours over the greater part of the Presidency including Sind with a view to give advice to local bodies and to enquire about their requirements in connection with the Sanitary Schemes. He found that the local bodies are becoming more eager for sanitary improvements and being aware that they can expect little financial help at present from Government suggested that improvement schemes should be worked out on a progressive basis suited to the resources at their command so that the beginning of improvements can be definitely made and schemes not hung up from year to year in expectation of more favourable conditions. Most of the schemes worked out previously being complete schemes, they need to be revised and recast into suitable stages. Thus the project work if anything is on the increase in Sanitary Engineer's Division. On the other hand owing to the abolition of the Northern Sanitary District and Southern Sanitary District and to the rearrangement of the Sub-divisions, this work has been hampered. Owing to the financial stringency also several sanctioned projects have been held over for want of funds.

A. P. MADDOCKS,

B. Sc., M. Inst. C. E.,

Secretary, Sanitary Board, Bombay Presidency.

APPENDIX II (*a*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31st DECEMBER 1922.

I. Summary.

The following summary shows the inspection and disinfection work done in the Port of Bombay in connection with out-going and in-coming vessels, as well as those lying in the harbour and docks, during the year ending 31st December 1922.

Nine hundred and eighteen vessels of all classes with 172,037 crew and passengers were examined during the year. The number of troops examined by the Military Medical Embarkation Staff is not included amongst passengers.

The clothing and bedding and other articles of 71,501 members of crews and passengers of out-going and in-coming vessels and of members of crews of vessels lying in the Port were disinfected. Of these 56,710 were Asiatic and African members of crews, third class or deck European and Indian passengers, 8,575 were pilgrims who left the Port of Bombay for ports out of India, and 6,216 were members of crews and passengers who arrived by vessels on which cases of infectious diseases had occurred during the voyage or while in the port. In addition to the above-mentioned numbers, 1,645 baggage coolies and some stevedores' men were disinfected in order to enable certain vessels to work cargo for a few hours after medical inspection and disinfection of their crews and passengers.

Forty-three vessels on which cases of infectious diseases occurred were disinfected. Out of the 13 vessels which carried pilgrims to Jeddah, 12 were thoroughly cleansed and freed from rats by means of sulphur dioxide gas generated in the Port Clayton Apparatus. The remaining pilgrim ship was fumigated by her own apparatus which was provided on board the vessel. Besides the 13 out-going pilgrim ships, 5 other vessels were fumigated. In addition to this number, 25 vessels were fumigated by the British India Steam Navigation Company's apparatus. Thirty-four persons who had been in contact with small-pox were vaccinated. In addition to this number, 7,960 out-going pilgrims were vaccinated by a special Vaccinating Staff lent by the Municipality, under the direction of the Police Commissioner.

II.—Out-Going Vessels.

2. In accordance with Government Notification, General Department, No. 1713, dated the 15th March 1917, the medical examination of all vessels, crews and passengers, proceeding to ports out of India, and the disinfection of the clothing and bedding of all Asiatic and African Members, of crews, of all passengers travelling third class who were not provided with cabin accommodation, of fourth class and deck passengers and of all Asiatic and African servants who sailed on such vessels, were carried out before they left the Port of Bombay.

3. Seven hundred and eighty-five outward bound vessels with 81,538 crew and 53,188 passengers, or a total of 1,34,726 persons, exclusive of troops who were examined by the Military Embarkation Staff, were inspected as against 910 vessels with 101,562 crew and 53,659 passengers, or a total of 155,221 persons, during the preceding year.

4. The bedding, boxes and suspected articles of clothing, etc., of 44,479 Asiatic and African members of crews, of 12,231 third class, fourth class and deck passengers and of 8,575 pilgrims who sailed on steamers bound for Ports out of India, were disinfected.

5. In certain cases the Asiatic and African members of old crews of vessels which called at Bombay to land mails and passengers and which sailed on the same day for a Port out of India, were exempt from the disinfection of their clothing and bedding. They were medically inspected on shore a short time before sailing.

6. A few vessels while in the docks failed to observe the rules laid down by Government which are aimed at preventing rats obtaining access to vessels. Paragraph 2 of the Plague Certificates attached to their Bills of Health (which certifies that the precautions prescribed for adoption in the Port of Bombay to prevent the ingress of rats into ships have been duly observed) was accordingly deleted at the time of departure.

7. Seven vessels had cases of small-pox, chicken-pox, plague and scarlatina among their crews and passengers within 12 days prior to their departure from this port. The Bills of Health granted to these vessels mentioned the diseases which had occurred on board, as well as the measures which had been taken before their departure for the prevention of the spread of infection on board or its introduction at other ports.

8. The surgical and medical equipment of 10 vessels was inspected during the year, in accordance with Rule 11 (1)*c* of the Native Passenger Ships Act X of 1887 as amended by the Government of India Notification No. 264-44c, dated Delhi, 15th January 1916.

III.—In-Coming Vessels.

9. In accordance with the rules prescribed under Government Notification No. 1713, dated the 15th March 1917, medical inspection and disinfection of vessels

which were actually infected or suspected of being infected were carried out. All Pilgrim-ships and all vessels which arrived from East African Ports were also inspected on arrival.

10. One hundred and twenty-one in-coming vessels of various kinds, with crews aggregating 13,992 persons and 22,824 passengers and pilgrims, were inspected during the year. Of these 121 vessels, 24 (including Hired Transports and Hospital Ships) were found to have had cases of infectious diseases on board at the time of arrival or during the voyage. In connection with these vessels there were 7 cases of small-pox, 3 cases of measles, 13 cases of chicken-pox, 5 cases of Jigger, 1 case of Scarlatina, 109 cases of influenza and 19 cases of pneumonia. The cases of influenza were confined to the members of crews, passengers and troops on five vessels, *viz.*, His Majesty's Ship "Renown," S. S. "Karoa," S. S. "Taroba," H. T. "Vasna" and H. T. "Margha." The cases which occurred on Hired Transports were dealt with by the Military Authorities on landing in Bombay, and those among the crews and passengers of other vessels by the Port Health Officer. The cases of the other infectious diseases enumerated above, *viz.*, Small-pox, Measles, Chicken-pox, Jigger, and Pneumonia, which occurred among the troops were removed to the Military Hospitals on shore for treatment, while those detected among the European crews were removed to St. George's Hospital and those among the Asiatic and African members of crews to the Jamsetji Jeejibhoy, Goculdas Tejpal, Arthur Road and Maratha Hospitals. The ships and the clothing and bedding of their crews were disinfected. Twelve vessels with 5,533 pilgrims arrived from Jeddah. One of these vessels had a case of Small-pox, and another 4 cases of chicken-pox, on arrival in Bombay.

IV.—Infectious Diseases on Vessels Arriving and Departing and in the Harbour and Docks.

11. Tabular statement No. 1 gives the number of cases of infectious diseases which occurred on vessels arriving at or departing from the Port of Bombay or lying in the harbour or docks.

It will be seen that 157 cases occurred on in-coming vessels as follows :—Seven cases of small-pox, 3 cases of measles, 13 cases of chicken-pox, 5 cases of jigger, 1 case of scarlatina, 109 cases of influenza and 19 cases of pneumonia. One case of small-pox and one case of chicken-pox were detected at the time of the disinfection of the crew of an out-going vessel. Two cases of chicken-pox and one case of pneumonia were reported to have occurred on vessels after their departure from this port, and these cases were landed at Aden.

12. Tabular statement No. 2 gives separately the details of infectious diseases on vessels in the harbour and docks. The clothing and bedding of the crews of these vessels aggregating 495 persons were disinfected.

13. Under Section A of the Epidemic Diseases Act III of 1897 amended by Act XXXVIII of 1920, the Port Health Officer has been empowered to adopt the same measures for the prevention of the spread of Cerebro-Spinal Meningitis by Maritime Traffic as are prescribed to prevent the spread of those diseases referred to in Part VI-A of Government Notification, No. 1713, dated the 15th March 1917, *vide* Government Order, General Department, No. 5607, dated the 4th May 1921.

V.—Disinfection and Fumigation of Ships.

14. During the year under report 61 vessels of all classes were disinfected and fumigated.

15. Of the 61 vessels referred to in the foregoing paragraph, 18 vessels were fumigated by means of the Clayton process. Of this number, 13 were outward-bound pilgrim vessels, 2 were rat-infected, 1 was infected with influenza, 1 was fumigated at the request of the owner for the purpose of embarking pilgrims at the Persian Gulf Ports, and 1 was fumigated under the regulations for plague. In addition to these vessels, the British India Steam Navigation Company fumigated 25 steamers by their own apparatus. This number is not included in tabular statement No. 1.

16. The Port Disinfection Station received every Monday clothing and bedding from various hospitals for disinfection. 624 bundles containing clothing and bedding of this kind were disinfected, as against 738 bundles during the preceding year. The clothing of 1,645 baggae-coolies to work cargo on outward-bound vessels after the disinfection of their crews or after obtaining Bills of Health, was disinfected at the request of the Commanders and Agents of the vessels.

VI.—General Health of Shipping.

17. During the year under report 1,412 persons connected with the shipping were admitted into the various hospitals in the City. St. George's Hospital admitted 604 European patients of whom 12 died, 581 were discharged cured and 11 remained under treatment after 31st December 1922. The Jamsetji Jeejibhoy Hospital admitted 324 Asiatic patients of whom 38 died and 286 were discharged cured; the Gokuldas Tejpal Hospital admitted 455 Asiatics of whom 35 died and 420 were discharged cured;

and the Arthur Road and Maratha Hospitals admitted 29 patients of whom 3 died, and 26 were discharged cured.

18. No deaths occurred in connection with the cleansing of bilges of ships during the year. There were 578 accidents on board of vessels which were lying in the Harbour and Docks. Of these 50 proved fatal.

VII.—Red Sea Pilgrim Traffic.

A.—Outward Pilgrim Traffic.

19. In accordance with the orders of the Government of India in force, the Outward Pilgrim Traffic of the year under report began on the 5th April 1922. Before the pilgrims embarked at Bombay, the ships were thoroughly cleansed and freed from rats by means of the Clayton process. One of these ships, the "Zayani", was claytonised on the 18th June and 76 rats (30 of which were in the store-room) were killed. Three of the rats were found to be infected with plague. This discovery was unexpected, as there had been no previous evidence of rat-mortality on the ship, nor had any plague rats been found in the berths where the ship had been moored. It was of the utmost importance that the ship should be entirely free from rats so that no plague infection should remain. To ensure this, one hundred rat-traps were set on board on the night of the 20th June. Seventeen rats were caught; ten of these, it is interesting to note, being found in one cage. It was somewhat startling to find that so many rats had been able to escape the fumigation which had been unquestionably thorough; but the fact illustrates the difficulty of entirely freeing a ship of rats by claytonisation. On the following night (21st June) 100 traps were again set, and 7 rats were caught. None of the trapped rats were plague-infected. On the 22nd June the ship (including the engine room and boats) was again thoroughly claytonised and six young rats were killed in different parts of the superstructure. On the night of the 22nd June, 50 traps were set on deck, in the boats, etc., but no rats were caught. The whole vessel was then sprayed with Kerosine Oil Emulsion to kill any fleas which might be about. As the vessel was then believed to be entirely free from rats and from plague infection, she was allowed to sail with pilgrims on the *24th June 1922*. It may be noted that deratisation of pilgrim ships, with a view to the prevention of plague, was instituted as a routine measure in 1906; but this is the first occasion on which plague-inflected rats have been found during the process. Routine fumigation is justified, however, by this one instance, because the presence of a plague-infected rat on a ship carrying hundreds of pilgrims might lead to a serious outbreak of human plague.

The pilgrims were medically inspected and their clothing and bedding disinfected before they were allowed to embark.

20. The names of the ships, the numbers of pilgrims carried by them and the date on which they left Bombay for Jeddah *via* Karachi, with the exception of three which sailed direct for Jeddah, are given below :—

No.	Name of Vessel.	Number of Pilgrims sailed.	Date of departure.
			1922.
1	S.S. "Shustar"	587	5th April *via* Aden.
2	S.S. "Jeddah"	718	22nd April *via* Karachi.
3	S.S. "Shustar"	307	10th May ,,
4	S.S. "Koweit"	839	17th May ,,
5	S.S. "Homayun"	499	4th June ,,
6	S.S. "Arabiatan"	1,265	8th June ,,
7	S.S. "Shustar"	600	13th June ,,
8	S.S. "Dara"	1,132	15th June ,,
9	S.S. "Zayani"	567	24th June ,,
10	S.S. "Akbar"	603	25th June ,,
11	S.S. "Accra"	395	30th June *via* Aden.
12	S.S. "Hejaz"	335	3rd July *via* Karachi.
13	S.S. "Tangistan"	728	5th July *via* Aden.
		8,575	

21. It will be seen that 8,575 pilgrims left during the season, as against 7,348 pilgrims in the previous year.

22. The classification of pilgrims, as far as it is obtainable, is as follows:—

467	Bombay Presidency (including Sind).	93	Malay States.
256	Bombay City.	139	Dutch (Java).
259	Madras Presidency.	304	Persia.
2,267	Bengal Presidency.	196	Mesopotamia.
639	Assam Province.	62	Russia.
117	Bihar and Orissa.	34	China.
1,011	Punjab and North-West Frontier.	280	Afghanistan.
966	United Provinces and Oudh.	27	Baluchistan.
231	Central Provinces.	319	Arabia.
103	Rajputana.	105	South Africa.
101	Burmah.	63	Unclassified.
536	Native States.		
6,953		1,622	

Total ... 8,575

23. Seven thousand nine hundred and sixty pilgrims were vaccinated before starting by a special staff placed under the Police Commissioner by the Municipality. Besides these, some pilgrims from other provinces and Native States had been vaccinated before leaving their homes for Bombay.

24. The Quarantine Camp at Kamaran was opened with the arrival of the first pilgrim-ship there—the S.S. "Tencer"—from the Straits on the 19th February, and closed with the departure of the S.S. "Koweit" from Busra and the Gulf on the 23rd July. The necessary Medical Staff required for the Camp was provided by the Surgeon-General with the Government of Bombay, and they were despatched to Kamaran by passenger and pilgrim ships.

25. Twenty-three deaths occurred at sea among pilgrims on out-going ships. They were chiefly due to Bronchitis, Pneumonia, Heart-failure, Senile Debility, etc.

26. In his reports to Government submitted through the Military Administrator, Kamaran, the Director of the Kamaran Lazaretto reported the hygienic conditions on board the pilgrim ships as good, and in some cases as excellent, without a death or case of sickness during the voyage.

27. Of the thirteen pilgrim-ships which sailed for Jeddah from this port, five were reported by the Director, Kamaran Lazaretto to have had pilgrims in excess of the number shown on their Bills of Health. Of these five pilgrim-ships three sailed from Bombay *via* Karachi, and two direct to Jeddah *via* Aden. On careful enquiries being made through the Shipping Agents and the Deputy Police Commissioner for the Port of Bombay, the excess numbers were found to be stowaways. Their presence on board was not discovered until the pilgrims were counted at Kamaran.

B.—Inward Pilgrim Traffic.

28. During the year under report 5,533 pilgrims arrived from Jeddah in 12 vessels as tabulated in statement No. 3 which is appended to this report.

29. One hundred and two deaths occurred among the pilgrims during the return voyage. The causes of deaths are chiefly attributed to Senile Debility, Pthysis, Dysentery, Pneumonia, Emphysema, Heat-Apoplexy, Diarrhoea, etc.

30. Four cases of Chicken-pox and one case of Small-pox were removed from two pilgrim-ships, on arrival at Bombay, to the Arthur Road and Goculdas Tejpal Hospitals for treatment.

31. The S. S. "Bahrein" arrived with 575 pilgrims on the 24th October. She was not suitably equipped as a pilgrim-ship and there appeared to be overcrowding.

VIII.—Sanitary state of the Harbour and Foreshore.

32. The sanitary state of the harbour and of the various bandars, basins and docks was fair.

IX.—Cholera, Small-pox, Plague, Influenza and Acute Pneumonia in the City of Bombay.

33. During the year under report 15 deaths from Cholera, 61 deaths from Small-pox, 632 deaths from Plague, 9,117 deaths from Acute Pneumonia and 528 deaths from Influenza occurred in the City of Bombay as against 70 deaths from Cholera, 406 deaths from Small-pox, 811 deaths from Plague and 1,389 deaths from Influenzal Pneumonia during the preceding year.

X.—General.

34. Lieut.-Colonel W. W. Houston, M.B., D.P.H., I.M.S., was in charge of the Port Health Department during the greater part of the year under report, *viz.*, from 1st

January to 18th November when he proceeded on a year's leave to England. The undersigned took over the duties of Port Health Officer from him on the after-noon of the 18th November 1922.

35. Among the members of the Port Health Staff, Lieut. H. F. Otto, I.M.D., was transferred to Karachi as Acting Health Officer of that Port, and Mr. B. F. Khambatta, M.B., B.S., B.M.S., of the Government Medical School, Hyderabad (Sind), was appointed in his place. Lieut. Otto accordingly relinquished his duties on the Port Health Staff, Bombay, on the afternoon of 10th November, and Mr. Khambatta took over these duties on the afternoon of 16th November 1922.

36. The members of the Medical, Clerical and Sanitary Police Staffs performed their duties satisfactorily.

37. During the year under report Rao Saheb Ramrao G. Kamalakar, Head Clerk to the Health Officer of the Port, Bombay, was on three months' privilege leave, *viz.*, from 4th May to 3rd August 1922, during which period Mr. Shamrao S. Dhurandhar, Second Clerk, performed the duties of the Head Clerk, and Mr. Dattaram N. Ratanjankar, 3rd Clerk and Typist, carried out the duties of the Second Clerk, a temporary hand being appointed in the latter's place.

38. During the year under report there were frequent changes in the personnel owing to several of the members of the Steam Launch, the Disinfection and Fumigation Barge and the Disinfection Shed Establishments, as well as of the menial staff of the Port Health Office, having to go on leave on account of ill-health.

39. The services of an extra Lady Doctor had to be requisitioned on a few occasions as usual, when the work was unusually heavy.

H. CAREY VENIS, D.P.H.,
Acting Health Officer of the Port.

Bombay Port Health Office,
New Customs House, dated 27th February 1923.

TABLE No. 1.

The following Tabular Statement gives a summary of the Shipping of the Bombay Port and work done in connection therewith for the year ending 31st December 1922 :—

Vessels including Country craft.	Number of vessels inspected.	Number of persons inspected.	Number of Asiatic African and Crew and 3rd Class or Deck Passengers disinfected.	Number of Vessels.		Number of persons vaccinated.	Diseases and cases of each.									
				Disinfected.	Fumigated.		Plague.	Cholera.	Smallpox.	Measles.	Chicken-pox.	Jigger.	Scarlatina.	Influenza.	Pneumonia.	Cerebro-spinal fever.
Entered ...	124	36,816	5,721	24	1	34	...	...	7	3	13	5	1	109	19	...
Left ...	785	134,726	65,285	7	15	7,960	...	...	1	...	3	...	...	...	1	...
In harbour during the year.	12	495	495	12	2	...	1	...	5	...	...	...	...	...	5	1
Total ...	918	172,037	71,501	43	18	7,994	1	...	13	3	16	5	1	109	25	1
Total for 1921.	1,094	199,595	93,504	62	26	6,964	6	6	33	16	21	7	4	17	13	...

TABLE No. 2.

The following table includes all Steam Ships, Square-rigged vessels and Native Sailing Craft which became infected while lying in the Port of Bombay during the year 1923 :—

Months.	Number of persons who were infected with infectious disease in the Docks and Bunders.		Total number of infected vessels.	Total number of infectious diseases in the Bombay Harbour.								Number of crew disinfected.
	Plague.	Cholera.		Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	In-fluenza.	Pneu-monia.	Cere-bro-spinal fever.	
January ...	...	...	...	...	...	...	...	...	...	...	...	...
February ...	...	...	3	...	...	1	...	...	...	2	...	65
March ...	...	...	1	...	...	1	...	...	...	...	...	3
April ...	...	...	2	1	...	1	...	...	...	...	...	9
May ...	...	...	...	...	...	...	...	...	...	...	...	...
June ...	...	...	...	...	...	...	...	...	...	...	...	...
July ...	...	...	...	...	...	...	...	...	...	...	...	...
August ...	...	...	1	...	...	...	...	...	...	1	...	5
September...	...	...	1	...	...	1	...	...	...	...	...	60
October ...	...	...	3	...	...	...	...	...	...	2	1	286
November ...	...	...	...	...	...	...	...	...	...	...	...	...
December ...	...	...	1	...	...	1	...	...	...	...	...	67
Total...	...	...	12	1	...	5	...	...	...	5	1	495

TABLE No. 3.

Statement showing the number of pilgrims who arrived in Bombay from Jeddah by vessels during the year 1922.

No.	Name of Ship.	Date of arrival.	Number of Crew inspected.	Number of Pilgrims inspected.	Number of deaths during voyage.	Number of cases of infectious disease on board.		Remarks.
						On arrival.	During voyage.	
		1922.						
1	S.S. "Jeddah" ...	26th August ...	127	190	13	...	...	
2	S.S. "Shuja" ...	28th do. ...	115	475	13	...	...	
3	S.S. "Accra" ...	28th do. ...	83	492	7	...	...	
4	S.S. "Sultania" ...	30th do. ...	94	148	15	...	...	
5	S.S. "Tangistan" ...	30th do. ...	68	320	11	...	...	
6	S.S. "Dara" ...	30th do. ...	118	698	10	...	...	
7	S.S. "Zayani" ...	12th September ...	79	596	5	...	...	
8	S.S. "Koweit" ...	12th October ...	106	550	4	...	...	
9	S.S. "Dara" ...	19th do. ...	115	821	7	4 Chicken-pox.	...	
10	S.S. "Bahrein" ...	24th do. ...	87	575	4	...	...	
11	S.S. "Firoozi" ...	1st December ...	79	32	...	...	...	
12	S.S. "Zayani" ...	7th do. ...	79	636	13	1 Small-pox.	...	
		Total ...	1,150	5,533	102	5	...	

APPENDIX II (*b*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF KARACHI FOR THE YEAR ENDING 31ST DECEMBER 1922.

I.—Outgoing Vessels.

During the year under report 360 steamers outward bound for ports out of India were medically inspected and given Bills of Health.

Of this number 163 steamers were proceeding to Aden, the Red Sea and Europe, and 197 to other ports out of India including the Persian Gulf.

Bills of Health were also granted after medical inspection to 312 country crafts.

In accordance with the Port Health Regulations issued by Government, the Indian crews as well as deck and third class passengers of all steamers and country crafts proceeding to ports out of India were medically inspected and their clothing, bedding and other articles disinfected at the Port Disinfecting Station, Kiamari, prior to their departure from the Port of Karachi.

II.—Incoming Vessels.

During the year under report 73 steam vessels arrived in the harbour in quarantine, and were duly inspected on their arrival.

Of these 73 steamers, 36 arrived from East African Ports, 8 from Jeddah *vid* Aden, and the remaining 29 hailed from various other ports.

18 country crafts also arrived here in quarantine from East African Ports, and were duly inspected on arrival.

III.—Synopsis of Inspection and Disinfection Performed.

The following tabular statement shows the number of vessels, crews and passengers inspected during the year under report :—

	Vessels.			Crews and Passengers		
	Steamers.	Country Crafts.	Total.	Of steamers.	Of Country Crafts.	Total.
Incoming	73	18	91	28,883	226	29,109
Outgoing	360	312	672	82,888	4,476	87,364
					Grand Total ...	116,473

Of these 116,473 persons (crews and passengers) who were medically inspected on their arrival at, or departure from, the Port of Karachi, 41,716 persons (crews and passengers) also had their clothing, bedding and other articles disinfected.

IV.—Miscellaneous Disinfection.

Throughout the year the clothing and bedding of patients suffering from infectious diseases, as well as the clothing and bedding of contacts, which were received for disinfection from the Epidemic Diseases Hospital, the Civil Hospital and other Institutions in Karachi, also from private individuals, were duly disinfected by saturated steam under pressure in the Equifex stoves of the Port Disinfecting Station, Kiamari.

In addition to the above, a large number of bundles of clothing, bedding, etc., which were sent for disinfection from the Customs Department, Karachi, the Karachi Port Trust and the Health Officer of the Karachi Municipality, were duly disinfected at the Port Disinfecting Station during the year under report.

V.—Plague.

During the year under report one case of plague occurred in the harbour on board the S.S. "Hindoo" on the 21st April 1922, the patient (an Indian fireman) being removed to the Epidemic Diseases Hospital, Karachi, the necessary precautionary measures (disinfection crew's kit and bedding, fumigation of their quarters, medical surveillance, etc.) were duly carried out. No further case of plague occurred on board the S.S. "Hindoo" up to the time of her sailing from Karachi for Europe on the 26th April 1922.

At the medical inspection of 960 emigrants of Anglo-Persian Oil Co., Abadan, which were sent back to Karachi and arrived by the S.S. "Barjora" on the 2nd April 1922 one of the emigrants (Kale Khan Niamat Khan) was found to be suffering from high fever and was removed to the Civil Hospital, Karachi, for treatment. On the morning of the 7th April 1922 a telephone message was received from the Civil Hospital that the patient was transferred to the Epidemic Diseases Hospital on the 16th April 1922 suffering from plague.

VI.—Cholera.

No cases of this disease were detected during the year.

VII.—Small-pox.

During the year under report 2 cases of small-pox were removed from the S.S. "City of Harvard" to the Epidemic Diseases Hospital, and the necessary precautionary measures (vaccination or re-vaccination of the entire crew, disinfection of affected crews quarters, bedding and clothing, etc.) were duly carried out and no further cases of small-pox have occurred.

The S.S. "Assaye" which arrived here on the 28th March 1922 from Southampton reported that 2 cases of varicella convalescent amongst the saloon crew (Indian) on board. The patients were isolated on board and the necessary precautionary measures were carried out.

The Hired Transports "Somali" and "Huntsgreen" arrived here from Southampton on the 17th October and 8th November 1922 respectively reported that one case of small-pox amongst the crew was landed from each of the steamers at Aden on the 11th October 1922 and at Port Said on 26th October 1922, respectively. On arrival here the crews and troops of both the steamers were medically inspected and found to be free from small-pox. The necessary precautionary measures were taken.

At the medical inspection and disinfection of the crew and passengers of the S.S. "Barpeta" at the Port Health Disinfecting Station, Kiamari, Karachi, on the 18th April 1922 one of the Karachi passengers was found to be suffering from small-pox and was not allowed to proceed.

VIII.—Chicken-pox.

One case of chicken-pox was removed to the Epidemic Diseases Hospital, Karachi, on the 4th April 1922 from the S.S. "Assaye." The usual precautionary measures were duly carried out on board.

IX.—Measles.

Two cases of measles were removed from incoming vessels to the Epidemic Diseases Hospital, Karachi, viz., one from the S.S. "Knowsley Hall" on the 22nd February and the other from the S.S. "Barjora" on the 23rd February 1922. The usual precautionary measures were carried out on board the steamers concerned.

X.—Parotitis (Mumps), Yellow Fever, Jigger, Sleeping Sickness, Scarlet Fever, Acute Pneumonia and Cerebro-Spinal Meningitis.

No cases of these diseases were detected during the year.

XI.—Influenza.

During the year under report 2 cases of Influenza amongst the Indian crew of the S.S. "Trecarrel" were removed to Hospital for treatment, and the necessary prophylactic measures taken on board. No further cases occurred.

XII.—Non-Notifiable Diseases.

Three cases of non-notifiable diseases amongst the crews and passengers were detected and sent to the Civil Hospital, Karachi, for treatment during the year.

XIII.—Deaths from Non-Notifiable Diseases.

During the year under report 25 deaths from various diseases were reported as having occurred on board of vessels either in Karachi Harbour or during the voyage to Karachi.

XIV.—Emigrants.

During the year no emigrants embarked from this port.

XV.—Red Sea Pilgrim Traffic.

A.—Outward Pilgrim Traffic.

In accordance with the instructions of Government, the Port of Karachi was open for the embarkation of Mahomedans going on pilgrimage to Mecca *vid* Jeddah, and eleven steamers carrying 3,975 pilgrims who embarked at Karachi sailed hence for Jeddah *vid* Aden during the Haj season of 1922.

The number of pilgrims sailed from Karachi last year was 3,477.

Before the pilgrims were allowed to embark they were medically inspected and their clothing and bedding disinfected at the Port Disinfecting Station, Kiamari.

The names of the ships, the number of pilgrims carried by them and the dates on which they sailed from Karachi for Jeddah are given below in tabular form :—

No.	Name of Vessels.	Number of Pilgrims embarked at Karachi.	Date of departure.
1	S.S. "Shushtar"	114	9th April 1922.
2	S.S. "Jeddah"	491	25th do. do.
3	S.S. "Shushtar"	452	14th May do.
4	S.S. "Koweit"	237	20th do. do.
5	S.S. "Humayun"	448	7th June do.
6	S.S. "Arabistan"	472	11th do. do.
7	S.S. "Shushtar"	200	16th do. do.
8	S.S. "Dara"	307	18th do. do.
9	S.S. "Akbar"	579	28th do. do.
10	S.S. "Zayani"	441	29th do. do.
11	S.S. "Hejaz"	234	7th July do.
	Total ...	3,975	

At the disinfection and medical inspection of Karachi pilgrims at the Port Health Disinfecting Station, Kiamari, Karachi, of the S.S. "Zayani" on the 29th June 1922 one of the pilgrims (women) was found to be suffering from small-pox and was therefore not allowed to proceed.

B.—Inward Pilgrim Traffic.

The following table shows the number of pilgrims who returned to Karachi from Jeddah, the names of the ships in which they travelled, and other particulars :—

No.	Name of Vessels.	Date of arrival.	No. of crew.	No. of pilgrims for Karachi.	No. of deaths during voyage.	No. of cases of infectious disease during voyage or on arrival.
1	S.S. "Jeddah"	23-8-1922	128	1,028	13	*Nil.*
2	S.S. "Shuja"	25-8-1922	115	726	12	*Nil.*
3	S.S. "Sultania"	25-8-1922	95	1,300	13	1
4	S.S. "Tangistan"	27-8-1922	68	546	10	*Nil.*
5	S.S. "Dara"	28-8-1922	117	596	10	*Nil.*
6	S.S. "Koweit"	9-10-1922	568	568	3	*Nil.*
7	S.S. "Dara"	17-10-1922	115	605	2	3
8	S.S. "Zayani"	4-12-1922	91	473	10	*Nil.*
	Total ...		835	5,842	73	4

In all 5,842 pilgrims returned to Karachi during the pilgrim season of 1922 whereas the numbers of pilgrims who returned to Karachi during the previous Haj season was 4,166.

One case of measles amongst the pilgrims of the S.S. "Sultania" was removed at Kamaran by the authorities. On arrival here of the S.S. "Sultania" the pilgrims were inspected and found to be free from measles or any other infectious disease.

The S.S. "Dara" which arrived here on the 17th October 1922 reported 3 cases of mild chicken-pox on board amongst the pilgrims. These pilgrims were onward-bound for Bombay and were strictly isolated on board from the rest of the ship, they were allowed to continue their journey to Bombay, and a telegram to this effect was duly despatched to the Port Health Officer, Bombay.

Seventy-three deaths which occurred during the voyage amongst the pilgrims returning from the Haj to Karachi were reported by the Medical Officers of the ships concerned as being due to old age, general debility, pneumonia, chronic malaria, diarrhœa and heart failure.

XVI.—Clayton Apparatus.

During the year four steamers were claytonised (fumigated) by means of the Clayton Disinfecting Apparatus, *i. e.* one for plague and three at the request of their Agents before sailing to ports out of India.

XVII.—Sanitary State of the Harbour.

The sanitary state of the harbour was satisfactory.

XVIII.—Plague, Cholera, Small-pox, Measles, Chicken-pox, Influenza and Acute-Pneumonia in the City of Karachi.

During the year under report 653 deaths from plague, 175 deaths from small-pox, 101 deaths from measles, 118 deaths from influenza, 375 deaths from acute-pneumonia and *nil* from chicken-pox and cholera occurred in the City of Karachi as against 54 deaths from plague, 160 deaths from cholera and 37 deaths from small-pox during the previous year.

XIX.—Staff.

The post of Health Officer of the Port was held by Dr. H. C. Venis, D.P.H., from 1st January until the 14th November 1922 and by Lieut. H. F. Otto, I.M.D., from 15th November until the end of the year. No change has taken place in the rest of the staff who have as heretofore performed their duties in a very efficient and admirable manner.

H. F. OTTO, Lieut., I.M.D.,
Ag. Health Officer of the Port of Karachi

Port Health Office,
Kiamari, Karachi, dated 12th March 1923.

APPENDIX II (*c*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF ADEN FOR THE YEAR 1922.

I.—General Remarks.

One thousand one hundred and thirty-four vessels and rigged vessels were granted bills of health during the year.

Of the above number 877 were sailing under the British flag and 257 under Foreign flags.

Bills of health issued to vessels having had cases of infectious diseases on board were annotated according to the circumstances of each case.

One thousand one hundred and forty-four bills of health were granted to Dhow during the year.

The accompanying Table A gives a list of vessels on board of which infectious diseases existed on arrival. In the case of these vessels all sanitary precautions were taken to prevent the spread of disease.

The following cases of infectious diseases were landed from the shipping:—

Small-pox	...	1	Chickenpox	...	3
Pneumonia	...	1			

II.—Pilgrim Traffic.

Twenty-nine ships carrying pilgrims passed through the port during the year. All were medically examined; but they were not granted pratique.

Year.	No. of ships.	No. of pilgrims.	No. of deaths.
1922	29	25,403	48

III.—Table A.

The following is the list of vessels on board of which cases of infectious existed on arrival at this port during the year:—

Date.	Name of Ship.	Nationality.	From	To	No. of cases.	Remarks.
30th January 1922 ...	S.S. Lady D. Pender.	British ...	Perim ...	Sea ...	2 Infl. ...	Treated on Board.
15th February 1922 ...	„ Delta ...	„ ...	Bombay ...	London ...	1 C. P. ...	Landed.
					1 Pneu....	„
22nd February 1922 ...	„ Macedonia ...	„ ...	„ ...	„ ...	1 Infl. ...	Treated on Board.
7th March 1922 ...	„ City of Valencia.	„ ...	Calcutta ...	New York ...	1 C. P	Landed.
8th March 1922 ...	„ Dunvegan Castle.	„ ...	Zanzibar ...	London ...	2 C. P. ...	Treated on Board.
15th March 1922 ...	„ Franz Ferdinand.	„ ...	Bombay ...	Hamburg ...	30 Infl. ...	„
27th March 1922 ...	„ Marichal Gallieni.	Foreign ...	Mombas ...	Marseiles ...	1 Pl. ...	„
16th April 1922 ...	„ Shustar ...	British ...	Bombay ...	Jeddah ...	1 Pneu. ...	„
					2 Infl. ...	„
19th April 1922 ...	„ Devanah ...	„ ...	Kobe ...	London ...	3 Mls. ...	„
26th April 1922 ...	„ Macedonia ...	„ ...	Bombay ...	„ ...	1 C. P. ...	Landed.
12th July 1922 ...	„ Malwa ...	„ ...	„ ...	„ ...	2 C. P. ...	Treated on Board.
11th October 1922 ...	„ H. T. Somali ...	„ ...	Southampton ...	Karachi ...	1 S. P. ...	* Landed.
4th November 1922 ...	„ Malwa ...	„ ...	London ...	Bombay ...	1 Pneu. ...	Treated on Board.
8th November 1922 ...	„ Kashmir ...	„ ...	Bombay ...	London ...	„ ...	„
6th December 1922 ...	„ Kaiser-I-Hind ...	„ ...	„ ...	„ ...	2 Infl. ...	„

N.B.—C. P. Stands for Chickenpox, Infl. for Influenza, S. P. for Small-pox, Mls. for Measles, Pneu for Pneumonia and Pl. for Plague.

* Denotes the cases landed and treated by the Military Authorities in Aden.

The three cases of Chickenpox from the Shipping were treated at the Infectious Diseases Hospital, Maalla.

IV. The following are the names and other information regarding the pilgrim ships which passed through Aden, during the year under report :—

Date.	Name of ships.	Nationality.	From	To	Number of		
					Pilgrims.	Infectious Cases.	Deaths.
16th April 1922 ...	S.S. Shustar ...	British ...	Bombay ...	Jeddah ...	698	1 Pneu 2 Infl.	1
2nd May 1922 ...	„ Jeddah ...	„ ...	„ ...	„ ...	1,209	...	...
21st May 1922 ...	„ Shustar ...	„ ...	„ ...	„ ...	754	...	...
27th May 1922 ..	„ Koweit ...	„ ...	Karachi ...	„ ...	1,068	...	1
16th June 1922 ...	„ Humayun ...	„ ...	Bombay ...	„ ..	942	...	...
19th June 1922 ...	„ Arbistan ...	„ ...	„ ...	„ ...	1,732	...	5
25th June 1922 ...	„ Shustar ...	„ ...	„ ...	„ ...	805	...	2
26th June 1922 ...	„ Dara ...	„ ...	„ ...	„ ...	1,434	...	3
4th July 1922 ...	„ Humayun ...	„ ...	Aden ...	„ ...	114	...	...
7th July 1922 ...	„ Akbar ...	„ ...	Bombay ...	„ ...	1,182	...	...
8th July 1922 ...	„ Jeddah ...	„ ...	Basra ...	„ ...	407	...	...
9th July 1922 ...	„ Zayani ...	„ ...	Pombay ...	„ ...	1,006	...	1
13th July 1922 ...	„ Accra ...	„ ...	„ ...	„ ...	427	...	1
19th July 1922 ...	„ Hedjaz ...	„ ...	„ ...	„ ...	620	...	...
20th July 1922 ...	„ Tangistan ...	„ ...	„ ...	„ ...	727	...	1
21st July 1922 ...	„ Koweit ...	„ ...	Busra ...	„ ...	55	...	...
30th July 1922 ...	„ Bahrein ...	„ ...	Bombay ...	„ ...	5	...	...
16th August 1922 ...	„ Jeddah ...	„ ...	Jeddah ...	Bombay ...	1,191	...	8
18th August 1922 ...	„ Shuja ...	„ ...	„ ...	„ ...	1,203	...	3
20th August 1922 ...	„ Tangistan ...	„ ...	„ ...	Bombay *vid* Karachi.	863	...	5
20th August 1922 ...	„ Accra ...	„ ...	„ ...	Bombay ..	481	...	3
21st August 1922 ...	„ Akbar ...	„ ...	„ ...	Busrah ...	1,167	...	3
22nd August 1922 ...	„ Dara ...	„ ...	„ ...	Bombay ...	1,300	...	6
27th August 1922 ...	„ Hejaz ...	„ ...	„ ...	Busrah ...	833	...	4
3rd September 1922...	„ Zayani ...	„ ...	„ ...	Bombay ...	704	...	1
2nd October 1922 ...	„ Koweit ...	„ ...	„ ...	„ ...	1,074	...	..
10th October 1922 ...	„ Dara ...	„ ...	„ ...	„ ...	1,415	...	...
15th October 1922 ...	„ Bahrein ...	„ ...	„ ...	„ ...	541	...	...
26th November 1922 .	„ Zayani ...	„ ...	„ ...	„ ...	1,086	...	...

V.—Establishment.

Lieut.-Col. J. L. Marjoribanks, M.D., D.P.H., I.M.S., held the appointment of Port Health Officer, Aden, from 1st January to 31st December 1922.

VI.—Office Establishment.

Mr. Othman Abdul Kadir held the appointment of Port Health Clerk from 1st January to 31st July 1922. He was granted privilege leave for one month combined with extraordinary leave for one month from 17th April 1922. Mr. Mohamed Hussein Hamza was appointed to act, for him during his absence on leave.

Mr. K. A. Sarkari was appointed as Fourth Grade Clerk *vice* Mr. Othman Abdul Kadir resigned. Mr. K. A. Sarkari held the appointment as a Port Health Fourth Grade Clerk from 1st August to 9th November 1922 and was retransferred to Port Office from 10th November 1922.

Mr. A. K. Taijoobux was appointed as a Fifth Grade Clerk *vice* Mr. K. A. Sarkari and held the appointment of Port Health Clerk from 10th November to 31st December 1922.

Peon Abdo Ahmed held the appointment as a peon from 1st January to 10th November 1922. He was granted privilege leave for 1 month and 14 days with extra-ordinary leave for 3 months and 16 days from 1st February 1922. Omer Abubaker was appointed temporarily to act for him during his absence on leave. Abdo Ahmed was dismissed from the service from 11th November 1922. Omer Abubakar was appointed as a peon from 11th November to 31st December 1922 *vice* Abdo Ahmed dismissed.

Abdulla Hussein held the appointment of peon from 1st January to 3st December 1922. He was granted privilege leave 2 months and 22 days combined with extra-ordinary leave for 2 months and 8 days from 1st April 1922. Peon Hussein Ahmed was appointed temporarily to act for him during his absence on leave.

VII.—Launch Establishment.

1. Driver Hussein Noman from 1st January to 31st December 1920.
2. Succani Mohamed Magon do. do.
3. Stoker Abdo Noman do. do.
4. Lascar Ali Magon do. do.

VIII.—Disinfecting Stove.

A fireman was retained for the care of the Disinfecting Stove during the year in accordance with Government Order, General Department, No. 4607 of 19th April 1920.

J. L. MARJORIBANKS,
Lt.-Col., I.M.S.,
Health Officer, Port of Aden.

APPENDIX III.

The following table shows when drainage systems and water-works were completed in the towns mentioned therein, with the average annual death-rate for the five-year period preceding the introduction and also the ratio for the five-year period ending with the year under report, exclusive of recorded plague mortality :—

The rural death-rates for each district are added for comparison.

District.	Taluka.	Town.	Date of completion of works of		Average annual death-rate for the five-year period ending with 1922 exclusive of plague.	Average annual death-rate for the five-year period preceding the introduction of drainage or water-supply or both.	Death-rate in rural circles for the year 1922.	Plague mortality in rural circles for the year 1922.
			Drainage.	Water-supply.				
1	2	3	4	5	6	7	8	9
.....	.....	Bombay ...	*a*1879	*b*1892	50·40	27·98	.....	.....
West Khandesh ...	Dhulia ...	Dhulia ...	.....	1896	31·87	32·50	26·94	.....
Ahmednagar	Ahmednagar ...	Ahmednagar ...	.....	1897	36·51	55·65	28·85	.....
Surat	Chorasi ...	Surat ...	.....	1898	34·05	39·77	22·79	·06
Ahmedabad	Daskroi ...	Ahmedabad ...	*c*1893	1891	48·76	45·21	24·40	.....
Karachi	Karachi ...	Karachi ...	*c*1895	1894	43·87	35·15	8·62	·15
Sukkur	Sukkur ...	Sukkur ...	.....	1895	28·93	28·70	17·93	.....
Bombay Suburban ...	South Salsette ...	Bandra ...	.....	1896	29·09	23·01	17·36	·58
Kolaba	Panvel ...	Panvel ...	.....	1895	25·43	19·50	29·53	.....
Dharwar	Hubli ...	Hubli ...	.....	1894	31·07	25·70	25·33	8·57
Ahmedabad	Viramgam ...	Viramgam ...	*d*1893	.....	42·00	69·28	24·88	.....
East Khandesh ...	Jalgaon ...	Jalgaon ...	.....	1909	31·05	31·56	28·41	.....
Sholapur	Pandharpur ...	Pandharpur ...	.....	1911	54·64	49·98	21·96	.....
Nasik	Nasik ...	Nasik ...	.....	1913	44·26	52·73	27·51	·39
Bijapur	Bijapur ...	Bijapur ...	.....	1913	32·79	30·08	21·63	.....
Poona	Poona City taluka	Poona ...	1916	.....	53·05	36·47	17·27	3·84
Nasik	Nasik ...	Trimbak ...	.....	1921	35·11	43·88	27·51	.....

a Drainage works commenced in 1879 are still in progress.

b Thana water-works completed in 1892. Besides there are Vehar and Tulshi water-works.

c Drainage system partially introduced.

d In 1893 the gradient of the channel round the town was improved to carry away the sullage water that used to accumulate and stagnate round the town.

APPENDIX IV.

ANNUAL FORM No. I.—*Showing the Births registered in the Districts of the Bombay Presidency during the year 1922.*

1	2	3			4			5			6	7	8	9		
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1921.			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of Births over Deaths per 1,000 of Population.	Excess of Deaths over Births per 1,000 of Population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.				Male.	Female.	Total.
	Western Registration District.															
1	East Khándesh ..	545,376	529,746	1,075,122	21,371	20,072	41,443	19·85	18·07	38·55	106·47	10·94	..	22·60	21·07	43·67
2	West Khándesh ..	309,511	303,201	612,712	12,068	11,359	23,427	19·69	18·54	38·23	106 24	12·43	..	22·12	20·97	43·09
3	Násik	418,510	406,706	825,216	16,183	15,220	31,403	19·61	18·44	38·05	106·33	7·51	..	19·18	17·88	37·06
4	Thána	388,310	368,589	756,899	12,767	11,821	24,588	16·37	15·62	32·49	108·00	8·92	..	14·16	13·26	27·42
5	Bombay Suburban ..	87,567	63,874	151,441	1,391	1,207	2,598	9·19	7·97	17·16	115·24	·02	..	Not available.		
6	Kolába	279,350	283,122	562,472	10,752	10,000	20,752	19·12	17·78	36·90	107·52	11·19	..	17·06	15·96	33·02
7	City of Bombay ..	751,948	396,867	1,148,815	10,224	9,931	20,155	8·90	8·64	17·54	102·95	..	14·60	10·61	9·83	26·44
	Central Registration District.															
8	Ahmednagar	362,947	361,031	723,978	13,832	12,889	26,721	19·10	17·80	36·90	107·32	7·87	..	17·34	16·02	33·36
9	Poona	500,601	487,080	987,681	15,752	14,411	30,163	15·95	14·59	30·54	109·31	2·65	..	15·54	14·27	29·81
10	Sholápur	382,374	359,256	741,630	14,153	13,214	27,367	19·03	17·82	36·91	107·11	9·20	..	18·48	17·38	35·86
11	Sátára	511,238	514,457	1,025,695	19,726	18,728	38,454	19·23	18·26	37·49	105·33	16·08	..	17·71	16·72	34·43
12	Ratnágiri	525,085	628,895	1,153,980	22,704	21,303	44,007	19·67	18·46	38·13	106·58	17·43	..	15·40	14·35	29·75
	Southern Registration District.															
13	Belgaum	484,615	465,047	949,662	10,922	17,564	38,486	19·92	18·50	38·42	107·73	12·64	..	19·47	18·73	38·20
14	Dhárwár	528,343	507,861	1,036,209	20,014	18,977	38,991	19·32	18·31	37·63	105·46	11·86	..	18·34	17·70	36·04
15	Bijápur	405,148	391,208	796,356	14,627	14,027	28,654	18·37	17·61	35·98	104·28	10·81	..	17·86	17·00	34·86
16	Kánara	203,950	197,526	401,476	7,472	6,979	14,451	18·61	17·38	35·99	107·06	7·52	..	16·43	15·49	31·92
	Gujarát Registration District.															
17	Surat	337,276	336,845	674,121	13,328	12,040	25,368	19·77	17·86	37·63	110·69	11·85	..	19·17	18·09	37·26
	Broach	158,568	149,143	307,711	6,332	6,158	12,490	20·58	20·01	40·59	102·83	13·37	..	21·94	20·67	42·61
19	Kaira	379,702	331,203	710,905	13,449	11,681	25,130	18·92	16·43	35·35	115·14	13·69	..	19·22	17·08	36·30
20	Panch Mahális ..	193,385	181,446	374,831	6,403	6,121	12,524	17·08	16·33	33·41	104·61	13·09	..	20·29	19·14	39·43
21	Ahmedabad	473,693	414,231	887,924	15,045	13,839	28,884	16·94	15·59	32·53	108·71	4·26	..	19·14	17·49	36·63
	Sind Registration District.															
22	Karáchi	302,563	228,094	530,657	5,654	4,836	10,490	10·66	9·11	19·77	116·91	2·05	..	11·62	10·18	21·80
23	Hyderabad	316,834	250,415	567,249	5,961	4,603	10,564	10·51	8·11	18·62	129·50	7·12	..	9·45	7·17	16·62
24	Thar and Párkar ..	221,074	175,233	396,307	3,936	3,174	7,170	10·08	8·01	18·09	125·90	7·72	..	9·07	7·04	16·11
25	Nawabshah	233,826	184,826	418,652	4,521	3,400	7,921	10·80	8·12	18·92	132·97	10·01	..	10·22	7·41	17·63
26	Lárkána	331,204	266,733	597,937	7,272	5,891	13,163	12·16	9·85	22·01	123·44	9·94	..	10·50	8·24	18·74
27	Sukkur	281,493	227,869	509,362	7,016	5,622	12,638	13·77	11·04	24·81	124·80	10·96	..	12·26	9·77	22·03
28	Upper Sind Frontier.	134,321	106,293	240,614	2,693	2,072	4,768	11·20	8·62	19·82	130·12	9·67	..	11·75	8·99	20·74
	Total for the Presidency ..	10,048,817	9,116,797	19,165,614	323,631	297,139	620,770	16·89	15·50	32·39	108·91	8·78	.	16·48	15·14	31·62

ANNUAL FORM No. II.—*Showing the* BIRTHS *and* DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1922.*

1	2	3	4	5			6		7			8
Serial Number.	Districts.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS 1921).			BIRTHS.		NUMBER OF DEATHS REGISTERED.			Number of Deaths of males to every 100 Deaths of females.
				Male.	Female.	Total.	Total Number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.	
	Western Registration District.											
1	East Khándesh	4,551	236	545,376	529,746	1,075,122	41,443	38·55	15,404	14,274	29,678	107·92
2	West Khándesh	5,438	113	309,511	303,201	612,712	23,427	38·23	8,161	7,648	15,809	106·71
3	Násik	5,877	140	418,510	406,706	825,216	31,403	38·05	13,191	11,960	25,151	110·19
4	Thána	3,434	220	388,310	368,589	756,899	24,588	32·49	9,518	8,321	17,839	114·38
5	Bombay Suburban... ...	142	1,066	87,567	63,874	151,441	2,598	17·16	1,450	1,145	2,595	126·64
6	Kolába	2,169	259	279,350	283,122	562,472	20,752	36·90	7,495	6,964	14,459	107·62
7	City of Bombay	24	47,867	751,948	396,867	1,148,815	20,155	17·54	20,925	16,000	36,925	143·23
	Central Registration District.											
8	Ahmednagar...	6,610	109	362,947	361,031	723,978	26,721	36·90	11,172	9,850	21,022	113·42
9	Poona	5,357	184	500,601	487,080	987,681	30,163	30·54	14,465	13,081	27,546	110·58
10	Sholápur	4,556	163	382,374	359,256	741,630	27,367	36·90	10,668	9,876	20,544	108 02
11	Sátára	4,910	209	511,238	514,457	1,025,695	38,454	37·49	11,295	10,667	21,962	105·89
12	Ratnágiri	3,989	289	525,085	628,895	1,153,980	44,007	38·13	12,075	11,823	23,898	102·13
	Southern Registration District.											
13	Belgaum	4,611	206	484,615	465,047	949,662	36,486	38·42	12,469	12,009	24,478	103·83
14	Dhárwár	4,606	225	528,348	507,861	1,036,209	38,991	37·63	13,401	13,299	26,700	100·77
15	Bijápur	5,707	139	405,148	391,208	796,356	28,654	35·98	10,411	9,633	20,044	108·09
16	Kánara	3,946	102	203,950	197,526	401,476	14,451	35·99	5,936	5,497	11,433	107·99
	Gujarát Registration District.											
17	Surat	1,651	408	337,276	336,845	674,121	25,368	37·63	8,943	8,439	17,382	105·97
18	Broach	1,468	210	158,568	149,143	307,711	12,490	40·59	4,288	4,089	8,377	104·86
19	Kaira	1,596	445	379,702	331,203	710,905	25,130	35·35	8,223	7,176	15,399	114·59
20	Panch Mahals	1,606	233	193,385	181,446	374,831	12,524	33·41	3,001	2,744	5,745	109·37
21	Ahmedabad	3,824	232	473,693	414,231	887,924	28,884	32·53	13,298	11,807	25,105	112·63
	Sind Registration District.											
22	Karáchi	11,231	47	302,563	228,094	530,657	10,490	19·77	5,271	4,132	9,403	127·57
23	Hyderabad	4,417	128	316,834	250,415	567,249	10,564	18·62	3,833	2,695	6,528	142·23
24	Thar and Párkar	13,636	29	221,074	175,233	396,307	7,170	18·09	2,307	1,804	4,111	123·82
25	Nawabshah	3,889	107	233,826	184,826	418,652	7,921	18·92	2,064	1,667	3,731	127·88
26	Lárkána	5,057	118	331,204	266,733	597,937	13,163	22·01	3,986	3,235	7,221	123·21
27	Sukkur	5,612	91	281,493	227,869	509,362	12,638	24·81	3,722	3,333	7,055	111·67
28	Upper Sind Frontier ...	2,664	90	134,321	106,293	240,614	4,768	19·82	1,331	1,110	2,441	119·91
	Total for the Presidency ...	122,578	156	10,048,817	9,116,797	19,165,614	620,770	32·39	238,303	214,278	452,581	111·21

1	2	9										10		
Serial Number.	Districts.	DEATHS PER 1,000 OF POPULATION FROM										MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	All causes.				
										Male.	Female.	Total.	Male.	Female.	Total.
	Western Registration District.														
1	East Khándesh	·00	·10	·77	14·33	·70	3·82	·26	7·62	28·24	26·94	27·60	50·00	51 62	50·80
2	West Khándesh	...	·01	...	13·82	·34	3·28	·28	8·07	26·37	25·22	25·80	50·33	52·16	51·24
3	Násik	...	·04	·04	14·63	·92	5·27	·31	9·24	31·52	29·41	30·48	52·40	53·81	53·10
4	Thána	·00	·06	·47	16·72	·31	1·61	·49	3·90	24·51	22·58	23·56	40·54	41·68	41·10
5	Bombay Suburban... ...	...	·04	·57	9·69	·88	1·65	·52	3·78	16·56	17·92	17·13	Not available.		
6	Kolába	·05	·07	·02	16 63	·55	1·99	·38	6 02	26 83	24·59	25·70	44 53	44·65	44·59
7	City of Bombay	·01	·05	·55	3·00	3·21	12·52	·73	11·06	27 83	40·32	32·13	44·19	64·31	51·43
	Central Registration District.														
8	Ahmednagar	...	·04	·03	10·66	1·96	5·84	·32	10·18	30·78	27·28	29·03	45·39	45·31	45·35
9	Poona	·01	·18	1·29	11·13	1·48	6·27	·39	7·04	28·90	26·86	27·89	46·39	46·15	46 27
10	Sholápur	·02	...	·52	13·45	1·93	2·83	·45	8·50	27·90	27·49	27·70	53·16	55·21	54·16
11	Sátára	...	·02	·32	11·46	1·59	1·91	·45	5·66	22·09	20·73	21·41	48·62	49 97	49·30
12	Ratnágiri	...	·03	·03	8·81	·82	4·20	·45	6·37	23·00	18·60	20·71	33·00	33 09	31 43
	Southern Registration District.														
13	Belgaum	·41	·04	1·51	6·86	2·48	3·19	·45	10·84	25·73	25·82	25·78	40·89	42·08	41·47
14	Dhárwár	·97	·04	2·06	7·35	·90	2·96	·36	11·13	25·36	26·19	25·77	41·83	44·15	42 98
15	Bijápur	1·56	·03	·01	9·85	1·75	2·87	·40	8·70	25·70	24·62	25·17	47·50	49·55	48·52
16	Kánara	·09	·10	·18	11·50	2·03	1·68	·46	12·44	29·11	27·83	28·48	37·14	37·58	37·36
	Gujarát Registration District.														
17	Surat	0·00	·24	·08	7·41	·90	10·28	·34	6·53	26·52	25·05	25·78	40·61	40·12	40·36
18	Broach	·00	·00	·00	11·34	·69	7·74	·43	7·02	27·04	27·41	27·22	44·65	47 26	45·92
19	Kaira	...	·03	..	7·01	·65	7·87	·58	5·52	21·66	21·67	21·66	41·91	43·73	42·75
20	Panch Mahals	...	·10	...	8·44	·28	2·03	·37	4·10	15·52	15·12	15·32	31·90	32·70	32·29
21	Ahmedabad	...	·02	·00	12·64	·77	8·63	·49	5·73	28·07	28·50	28·28	46·82	49·68	48·18
	Sind Registration District.														
22	Karáchi	·05	·38	1·27	6·65	·29	2·77	·34	5·97	17·42	18·12	17·72	30.99	32·44	31·66
23	Hyderabad	...	·01	·01	8·25	·20	1·65	·27	1·12	12.10	10 76	11·51	31·66	33·44	32·58
24	Thar and Párkar	...	·01	...	8·57	·05	·70	·39	·65	10·44	10·29	10·37	33·80	34·69	34·36
25	Nawabshah	...	·01	·02	7·94	·02	·20	·27	·45	8·83	9·02	8·91	32·79	34·44	33·53
26	Lárkána	...	·00	...	10·76	·05	·20	·10	·77	12·03	12·13	12·08	31·58	31 76	31·65
27	Sukkur	...	·02	·00	11·29	·09	·23	·29	1·93	13·22	14·63	13·85	34·87	38·82	36·65
28	Upper Sind Frontier ...	...	·01	...	9·38	·05	·14	·30	·27	9·90	10·44	10·15	31·79	35·60	33·49
	Total for the Presidency...	·14	·06	·44	10·33	1·10	4·31	·41	6·82	23·71	23·50	23·61	42·23	44·25	43·20

ANNUAL FORM No. III.—DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1922.*

1		3												4	
No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August	September	October.	November.	December.	Total deaths registered during the year.	No.
	Western Registration District.														
1	East Khándesh	3,109	3,240	3,136	3,020	2,5[illegible]8	1,719	1,439	2,324	2,366	2,207	2,096	2,045	29,67[illegible]	1
2	West Khándesh	1,442	1,597	1,596	1,418	1,134	816	869	1,234	1,277	1,297	1,525	1,6[illegible]4	15,86[illegible]	2
3	Násik	2,589	2,397	2,211	1,997	1,69[illegible]	1,358	1,704	2,151	2,157	2,339	2,117	2,[illegible]13	25,151	3
4	Thána	1,953	1,769	1,688	1,499	1,246	901	991	1,200	1,361	1,417	1,786	1,959	17,8[illegible]	4
5	Bombay Suburban ...	260	271	298	2[illegible]6	190	181	184	206	189	192	221	307	2,5[illegible]	5
6	Kolaba	1,550	1,583	1,462	1,264	970	844	995	1,003	1,116	1,047	1,180	1,434	14,459	6
7	City of Bombay	3,542	3,325	3,318	3,351	2,867	2,496	2,829	2,943	2,821	3,271	2,998	3,164	36,026	7
	Central Registration District.														
8	Ahmednagar	2,383	1,817	1,887	1,674	1,472	1,349	1,6[illegible]4	1,792	1,72[illegible]	1,804	1,72[illegible]	1,828	21,02[illegible]	8
9	Poona	2,276	1,892	2,091	2,144	2,004	1,790	2,163	2,630	2 645	2,534	2,432	2,9[illegible]5	27,64	9
10	Sholápur	1,685	1,621	1,657	1,519	1,571	1,207	1,5[illegible]1	1,[illegible]02	2 010	1,8[illegible]6	1,[illegible]40	2,115	20,544	10
11	Sátára	1,509	1,334	1,552	1,[illegible]45	1,[illegible]48	1,477	1,[illegible]57	2,145	2,338	2,210	1,9[illegible]1	2,246	21,9[illegible]	11
12	Ratnágiri	2,619	2,253	2,039	1,905	1,733	1,500	1,888	1,810	1,976	1,913	1,963	2,289	23,898	12
	Southern Registration District.														
13	Belgaum	1,351	1,373	1,626	1,683	1,931	1,811	2,172	2,342	2,633	2,618	2,481	2,462	24,475	13
14	Dhárwár	1,618	1,630	1,942	1,769	1,867	1,742	2,115	2,679	2,821	3,080	2,513	3,124	26,700	14
15	Bijápur	1,028	881	1,030	1,173	1,537	1,901	2 014	1,886	2,065	2,[illegible]24	2,146	2,239	20,044	15
16	Kánara	981	1,002	953	815	734	889	1,038	958	980	980	947	1,161	11,433	16
	Gujarát Registration District.														
17	Surat	1,338	1,263	1,314	1,182	1,220	1,150	1,300	1,515	1,472	1,541	1,841	2,187	17,382	17
18	Broach	644	543	597	491	567	498	551	721	777	910	1,010	1,039	8,377	18
19	Kaira	1,203	1,009	1,178	1,147	1,188	1,127	1,209	1,419	1,520	1,695	1,387	1,338	15,390	19
20	Panch Mahális	440	378	436	404	375	342	398	426	632	554	[illegible]44	616	5,745	20
21	Ahmedabad... ...	2,595	2,313	2,395	2,016	1,846	1,418	1,565	2,004	2,154	2,394	2,194	2,221	25,105	21
	Sind Registration District.														
22	Karáchi	1,036	1,[illegible]19	1,063	1,143	956	556	459	487	658	627	7[illegible]2	706	9,403	22
23	Hyderabad	836	6[illegible]9	635	522	488	400	424	425	416	5[illegible]0	639	594	6,528	23
24	Thar and Párkar ...	.565	435	412	289	308	241	257	183	264	255	453	449	4,111	24
25	Nawabshah	410	348	307	288	276	248	216	2[illegible]6	245	331	482	372	3 731	25
26	Lárkána	965	591	522	500	498	412	404	402	482	561	1,129	752	7,221	26
27	Sukkur	614	480	439	518	552	454	535	454	538	693	909	819	7,055	27
28	Upper Sind Frontier ...	285	182	181	190	173	149	168	148	142	271	313	239	2,441	28
	Total for the Presidency...	40,872	37,263	37,875	35,772	33,475	29,025	33,324	37,601	39,683	41,146	41,834	44,709	4,53,5[illegible]1	
	Ratio of deaths per 1,000 in each month... ...	2·13	1·94	1·93	1·87	1 75	1·51	1·74	1·96	2·07	2·15	2·18	2·33	23·61	

ANNUAL FORM NO. IV.—DEATHS *registered according to* AGE IN

1	2	3		4		5		6	
No.	Districts.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.								
1	East Khándesh	4,323	3,601	3,754	3,875	745	684	470	463
2	West Khándesh	2,277	1,973	2,115	2,160	365	352	220	187
3	Násik	3,413	2,828	2,473	2,468	632	607	326	316
4	Thána	1,799	1,560	1,207	1,240	566	617	368	334
5	Bombay Suburban	213	156	159	133	68	64	71	62
6	Kolába	1,730	1,374	1,022	1,077	325	380	198	205
7	City of Bombay	4,332	3,834	2,291	2,553	654	766	595	619
	Central Registration District.								
8	Ahmednagar	2,736	2,119	2,053	1,913	446	437	327	274
9	Poona	3,457	2,832	2,715	2,417	680	641	482	491
10	Sholápur	3,126	2,510	2,074	2,115	484	477	267	267
11	Sátára	2,982	2,520	2,080	2,086	484	499	299	299
12	Ratnágiri	1,935	1,557	1,537	1,509	500	538	318	314
	Southern Registration District.								
13	Belgaum	2,768	2,134	2,322	2,436	818	807	466	496
14	Dhárwár	3,087	2,397	2,417	2,539	797	907	623	637
15	Bijápur	2,266	1,869	2,021	2,027	697	634	334	303
16	Kánara	1,471	1,234	555	571	209	218	130	118
	Gujarat Registration District.								
17	Surat	2,510	2,220	1,506	1,586	434	463	247	201
18	Broach	1,228	1,109	943	899	164	160	103	85
19	Kaira	1,990	1,861	1,766	1,566	286	251	177	172
20	Panch Mahals	672	613	585	618	245	233	113	81
21	Ahmedabad	3,195	2,876	2,184	2,058	431	447	291	308
	Sind Registration District.								
22	Karáchi	1,276	1,092	601	586	270	247	266	229
23	Hyderabad	874	686	343	328	145	123	135	87
24	Thar and Parkar	434	387	222	165	94	94	103	50
25	Nawabshah	507	419	222	202	92	78	75	55
26	Lárkána	939	831	473	385	203	173	139	84
27	Sukkur	1,248	1,019	510	535	164	161	109	103
28	Upper Sind Frontier	342	300	172	167	88	70	48	29
	Total for the Presidency	57,130	47,841	40,342	40,214	11,086	11,128	7,298	6,873
	Population according to Census of 1921	287,146	2,82,999	885,160	924,937	1,468,775	1,379,851	1,224,010	969,652
	Ratios per 1,000 living ...	198·96	169·05	45·58	43·48	7·55	8·06	5·96	7·09

NOTE.—Civil population by age groups not being available, rates in Form IV are calculated on the total population Indian Civil

THE DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1922.*

7		8		9		10		11		12		13
15 and under 20.		20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
295	384	783	963	931	908	1,036	711	932	601	2,135	2,084	1
168	235	409	579	570	508	523	319	559	367	955	968	2
293	411	960	998	1,190	1,043	1,174	835	993	717	1,737	1,737	3
269	276	820	896	1,151	1 000	1,150	614	955	639	1,233	1,205	4
51	50	167	165	185	152	172	99	145	75	216	189	5
190	253	502	639	762	687	746	535	821	567	1,179	1,247	6
826	692	3,034	1,933	3,203	1,667	2,057	970	1,547	753	2,386	2,313	7
243	339	704	804	872	779	942	649	931	699	1,918	1,837	8
358	430	1,040	1,193	1,277	1,232	1,127	833	1,062	668	2,267	2,344	9
161	222	568	729	693	654	588	487	709	574	1,078	1,841	10
247	309	695	722	794	722	676	596	799	572	2,239	2,342	11
318	349	1,117	1,250	1,124	1,162	962	865	1,254	930	3,010	3,349	12
328	366	852	1,016	881	954	923	699	944	723	2,167	2,379	13
312	450	929	1,323	1 079	1,200	949	769	1,061	858	2,147	2,219	14
196	225	624	776	786	776	720	540	888	637	1,879	1,846	15
117	198	526	691	691	623	705	375	595	469	937	1,000	16
183	256	577	750	644	674	690	475	742	418	1,410	1,390	17
80	95	220	292	269	299	311	261	392	261	678	628	18
156	159	501	474	631	631	732	468	793	454	1,171	1,140	19
62	90	152	192	234	200	221	167	272	155	446	395	20
426	414	1,189	1,097	1,490	1,191	1,307	923	1,323	1,000	1,462	1,493	21
204	216	654	509	621	421	468	257	351	170	560	415	22
126	134	442	364	536	330	491	182	350	180	391	281	23
62	75	296	271	311	245	296	159	224	130	264	219	24
93	86	202	270	237	208	227	107	185	75	224	167	25
169	157	413	406	488	358	418	213	326	200	416	308	26
112	158	294	364	304	272	328	203	257	168	396	324	27
45	51	118	142	143	120	115	87	95	41	165	101	28
6,080	7,080	18,808	19,918	22,117	19,016	20,056	13,434	19,508	13,113	35,868	35,661	
751,226	650,813	1,781,925	1,656,476	1,642,370	1,349,143	1,025,082	901,989	615,651	556,378	457,220	430,976	
8·11	10·88	10·55	12·02	13·47	14·09	19·57	14·89	31·56	23·57	78·45	74·14	

figures which include Europeans Anglo-Indians and Military and Jail population. The rates in other forms are based on the population.

ANNUAL FORM No. IV (*a*).—*Showing the details of* DEATHS *under one year*

1	2	Not exceeding		
		Male.		
No.	Districts.	Under one week.	Over one week.	Total.
		1	2	3
	Western Registration District.			
1	East Khándesh	931	630	1,561
2	West Khándesh	474	403	877
3	Násik	820	572	1,392
4	Thána	590	247	837
5	Bombay Suburban	66	53	99
6	Kolába	586	354	940
7	City of Bombay	1,054	704	1,758
	Central Registration District.			
8	Ahmednagar	639	353	992
9	Poona	695	544	1,239
10	Sholápur	775	512	1,287
11	Sátára	737	433	1,170
12	Ratnágiri	553	445	998
	Southern Registration District.			
13	Belgaum	647	534	1,181
14	Dhárwár	706	580	1,286
15	Bijápur	460	166	626
16	Kánara	576	369	945
	Gujarát Registration District.			
17	Surat	641	447	1,088
18	Broach	284	240	524
19	Kaira	373	364	737
20	Panch Mahals	159	148	307
21	Ahmedabad	539	645	1,184
	Sind Registration District.			
22	Karachi	302	192	494
23	Hyderabad	210	162	372
24	Thar and Párkar	152	83	235
25	Nawabshah	173	126	299
26	Lárkána	209	195	404
27	Sukkur	232	217	449
28	Upper Sind Frontier	90	78	168
	Total for the Presidency ...	13,073	10,076	23,749

IN THE DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1922.*

DEATHS UNDER ONE YEAR

one month.				Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No
Female.			Total of columns 3 and 6.										
Under one week.	Over one week.	Total.		Male.	Female.	Total.	Male.	Female.	Total.				
4	5	6	7	8	9	10	11	12	13	14	15	16	17
744	559	1,303	2,864	1,609	1,289	2,898	1,153	1,003	2,162	4,323	3,601	7,924	1
376	347	723	1,600	908	784	1,692	492	466	958	2,277	1,973	4,250	2
628	522	1,150	2,542	1,261	1,047	2,308	760	631	1,391	3,413	2,828	6,241	3
486	206	692	1,529	686	576	1,262	276	232	508	1,799	1,500	3,299	4
47	20	67	166	61	56	117	53	33	86	213	156	369	5
484	234	718	1,658	553	440	993	237	216	453	1,730	1,374	3,104	6
829	639	1,468	3,326	1,183	1,032	2,215	1,391	1,334	2,725	4,332	3,834	8,166	7
489	295	784	1,776	1,038	835	1,873	706	500	1,206	2,736	2,119	4,855	8
507	439	946	2,185	1,067	950	2,017	1,151	936	2,087	3,457	2,832	6,289	9
564	410	974	2,261	951	855	1,806	888	681	1,569	3,126	2,510	5,636	10
663	385	1,048	2,218	1,174	958	2,132	638	514	1,152	2,982	2,520	5,502	11
450	345	795	1,793	559	447	1,006	378	315	693	1,935	1,557	3,492	12
485	444	929	2,110	1,010	771	1,781	577	434	1,011	2,768	2,134	4,902	13
540	483	1,023	2,309	1,105	832	1,937	696	542	1,238	3,087	2,397	5,484	14
351	360	711	1,637	824	686	1,510	516	472	988	2,266	1,869	4,135	15
460	297	757	1,702	365	321	686	161	156	317	1,471	1,234	2,705	16
551	401	952	2,040	867	739	1,606	555	529	1,084	2,510	2,220	4,730	17
266	217	483	1,007	363	331	694	341	295	636	1,228	1,109	2,337	18
408	353	761	1,498	722	634	1,356	531	466	997	1,990	1,861	3,851	19
159	118	277	584	236	184	420	129	152	281	672	613	1,285	20
493	519	1,012	2,196	1,064	965	2,029	947	899	1,846	3,195	2,876	6,071	21
226	160	386	880	377	310	687	405	386	791	1,276	1,082	2,358	22
151	128	279	651	252	195	447	250	212	462	874	686	1,560	23
134	83	217	452	108	93	201	91	77	168	434	387	821	24
136	108	244	543	182	154	336	26	21	47	507	419	926	25
216	157	373	777	391	357	748	144	101	245	939	831	1,770	26
214	190	404	853	387	269	656	412	346	758	1,248	1,019	2,267	27
86	55	141	309	73	81	154	101	78	179	342	300	642	28
11,143	8,474	19,617	43,366	19,376	16,191	35,567	14,005	12,033	26,038	57,180	47,841	104,971	

ANNUAL FORM No. V.—DEATHS *registered according to* CLASSES *and*

1	2	3							
		POPULATION ACCORDING TO CENSUS							
No.	Districts.	Mahomedans.		Hindus.		Jains.		Christians.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.								
1	East Khandesh	55,176	52,333	484,070	472,143	4,708	3,992	625	518
2	West Khandesh	16,011	15,346	262,850	256,881	2,255	1,832	543	445
3	Nasik	23,806	21,948	388,491	379,357	4,076	3,445	1,577	1,524
4	Thana	17,411	14,481	354,764	338,299	1,524	744	13,339	13,112
5	Bombay Suburban	8,728	5,625	65,684	46,744	1,354	632	10,471	9,609
6	Kolaba	14,012	14,342	262,562	266,748	1,153	487	622	482
7	City of Bombay	126,177	57,210	543,171	289,272	17,567	6,297	32,198	16,096
	Central Registration District.								
8	Ahmednagar	18,966	17,870	327,801	325,681	6,867	6,171	10,967	11,185
9	Poona	23,591	19,913	465,217	454,887	6,706	4,984	5,109	5,448
10	Sholapur	20,467	28,235	346,655	326,392	4,015	3,413	1,067	1,055
11	Satara	18,337	17,652	483,403	488,459	8,104	7,197	1,102	886
12	Ratnagiri	34,410	46,581	486,985	578,134	819	821	3,078	3,339
	Southern Registration District.								
13	Belgaum	40,875	38,943	418,962	403,209	21,868	19,987	2,963	2,840
14	Dharwar	73,484	69,553	446,006	430,468	5,741	4,809	3,321	2,868
15	Bijapur	48,940	47,185	354,458	342,191	1,675	1,320	537	526
16	Kanara	12,580	13,822	182,887	175,191	595	519	8,051	7,994
	Gujarat Registration District.								
17	Surat	28,071	28,179	279,833	280,147	5,427	4,817	948	680
18	Broach	36,085	33,903	117,003	110,217	1,758	1,497	1,406	1,178
19	Kaira	34,193	31,022	328,634	284,525	3,210	3,128	13,276	12,236
20	Panch Mahals	13,888	12,797	171,905	161,201	956	857	1,626	1,555
21	Ahmedabad	53,637	45,433	399,443	348,852	18,353	17,094	2,424	1,947
	Sind Registration District.								
22	Karachi	213,208	168,986	82,361	53,744	635	483	3,611	2,848
23	Hyderabad	231,341	178,455	87,318	71,811	45	37	127	87
24	Thar and Parkar	118,596	94,139	98,214	77,812	150	118	43	16
25	Nawabshah	181,280	139,855	52,448	44,900	1	.....	19	13
26	Larkana	277,501	222,052	53,024	44,130	.....	.....	27	9
27	Sukkur	200,273	158,123	79,859	68,329	8	8	161	117
28	Upper Sind Frontier	120,494	95,783	13,561	10,294	29	20	4	6
	Total of the Presidency ...	2,071,538	1,689,766	7,637,589	7,130,018	119,619	94,709	119,242	98,138

N. B.—This and all the other Statements refer to Indians only and not to Europeans. "Hindus" include

Note.—Population by classes n Form V includes Jail figures.

OF 1921.

Parsis.		Other Classes.		Total.		Total.	Mahomedans.		Hindus.	
Male.	Female.	Male.	Female.	Male.	Female.		Male.	Female.	Male.	Female.
261	178	536	582	545,376	529,746	1,075,122	1,332	1,342	14,065	12,926
120	70	28,244	28,649	309,511	303,201	612,712	386	364	7,767	7,277
509	400	51	32	418,510	406,706	825,216	593	597	12,575	11,335
1,532	1,907	159	150	388,310	368,589	756,899	432	359	8,769	7,680
1,246	1,199	84	66	87,567	63,874	151,441	161	115	1,076	879
177	139	837	925	279,350	283,122	562,472	330	319	7,122	6,601
27,948	24,286	5,505	3,718	751,948	396,867	1,148,815	4,531	3,317	14,225	11,031
90	90	62	34	364,753	361,031	725,784	591	509	10,513	9,277
1,557	1,510	454	448	500,601	487,080	987,681	658	654	13,695	12,332
170	161	...	...	382,374	359,256	741,630	776	732	9,842	9,094
261	237	31	26	511,238	514,457	1,025,695	352	331	10,855	10,242
22	14	16	11	525,085	628,895	1,153,980	881	782	11,117	10,973
59	62	22	7	484,615	465,047	949,662	1,129	1,105	10,868	10,455
129	121	45	24	528,348	507,861	1,036,209	1,922	1,934	11,293	11,205
19	11	...	...	405,148	391,208	796,356	1,182	1,053	9,194	8,558
9	4	1	...	203,950	197,526	401,476	350	267	5,381	5,055
5,037	6,014	17,960	17,008	337,276	336,845	674,121	598	535	6,994	6,687
1,045	1,176	1,271	1,172	158,563	149,143	307,711	852	833	2,790	2,587
54	49	335	252	379,702	331,203	710,905	796	695	7,306	6,377
127	113	4,883	4,923	193,335	181,446	374,831	170	169	2,123	1,904
861	802	174	173	473,693	414,231	887,924	1,409	1,357	11,552	10,106
1,396	1,323	1,899	1,219	302,563	228,094	530,657	3,152	2,477	2,018	1,582
34	23	14	8	316,834	250,415	567,249	2,426	1,617	1,403	1,073
4	4	4,067	3,144	221,074	175,233	396,307	1,221	1,022	1,071	775
3	...	75	58	233,826	184,826	418,652	1,453	1,127	594	535
2	...	650	542	331,204	266,733	597,937	3,099	2,501	883	731
67	56	1,836	1,252	281,493	227,869	509,362	2,022	1,777	1,686	1,546
...	...	233	190	134,321	106,293	240,614	1,067	883	263	224
42,739	39,940	69,444	64,613	10,050,623	9,116,797	19,167,420	33,871	28,793	1,97,040	179,047

Number of Deaths Registered.										
Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1	..	5	1	1	4	...	1	15,404	14,274	29,678
...	...	8	6	...	1	...	...	8,161	7,648	15,809
7	11	9	13	6	3	1	1	13,191	11,960	25,151
2	1	273	240	34	32	8	9	9,518	8,321	17,839
7	4	189	137	11	8	6	2	1,450	1,145	2,595
1	2	18	19	1	3	23	20	7,495	6,964	14,459
471	309	866	656	668	553	164	134	20,925	16,000	36,925
11	11	56	52	1	1	...	...	11,172	9,850	21,022
10	9	67	64	17	12	18	10	14,465	13,081	27,546
49	48	1	...	...	2	...	...	10,668	9,876	20,544
82	89	3	3	3	2	...	...	11,295	10,367	21,962
7	5	70	63	...	...	...	...	12,075	11,823	23,898
424	396	48	53	...	...	...	...	12,469	12,009	24,478
122	128	61	31	2	1	1	...	13,401	13,299	26,700
17	11	18	11	...	...	...	...	10,411	9,633	20,044
14	18	191	157	...	...	...	...	5,936	5,497	11,433
103	79	14	13	125	93	1,109	1,027	8,943	8,439	17,382
26	12	2	3	32	30	586	624	4,288	4,089	8,377
33	32	85	70	...	1	3	1	8,223	7,176	15,399
10	13	6	9	...	...	692	629	3,001	2,741	5,745
276	295	39	32	9	10	13	7	13,298	11,807	25,105
1	...	70	50	25	13	5	10	5,271	4,132	9,403
...	1	1	2	...	...	3	2	3,833	2,695	6,528
2	3	...	...	...	...	13	4	2,307	1,804	4,111
1	1	...	...	...	...	16	4	2,064	1,667	3,731
...	...	...	...	...	...	4	3	3,986	3,235	7,221
...	...	1	1	1	1	12	8	3,722	3,333	7,055
...	...	...	...	...	...	1	3	1,331	1,110	2,441
1,677	1,478	2,101	1,686	936	775	2,678	2,499	238,303	214,278	452,581

SEX, *in the Districts of the* BOMBAY PRESIDENCY *during the year 1922.*

5

RATIO OF DEATHS PER 1,000 OF POPULATION.

Mahomedans.		Hindus.		Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
24·14	25·65	29·05	27·38	·21	...	8·00	1·93	3·83	22·37	·00	1·72	28·24	26·94	27·60
24·11	23·72	29·55	28·33	...	...	14·73	13·48	...	14·29	...	...	26·37	25·22	25·80
24·91	27·20	32·37	29·88	1·72	3·19	5·71	8·53	11·79	7·50	19·61	31·25	31·52	29·41	30·48
24·81	24·79	24·72	22·70	1 31	1·34	20·47	18·30	22·19	16·78	50·31	60·00	24·51	22·58	23·57
18·45	20·44	16·38	18·80	5·17	6 33	18·05	14·26	8·83	6·07	71·43	30·30	16·56	17·93	17·14
23·55	22·24	27·13	24·75	·87	4·11	28·94	39·42	5·65	21·58	27·48	21·62	26·83	24·60	25·71
35·91	57·92	26·19	38·13	26·78	19·07	26·90	40·76	23·90	22·77	29·79	36·04	27·69	40·32	32·14
31·16	28·48	32 07	28·48	1·69	1·78	5·11	4·65	11·11	11·11	...	...	30·63	27·28	2 ·96
27·89	32·84	29·44	27·11	1·49	1·81	13·11	11·75	10·92	7·95	39·65	22·32	28·90	26·86	27·50
25·47	25·93	28·39	27·86	13·20	14·06	·94	...	...	12·42	...	...	27·90	27·48	27·70
19·20	18·75	22·46	20·97	10·12	12·37	2·71	3·39	11·49	8·44	...	...	22·09	20·73	21·41
25·60	16·79	22·83	18·98	8·55	6·09	22·74	18·87	...	...	...	...	23·00	18·89	20·71
27·62	28·37	25·94	25·93	19·39	19·81	16·20	16·66	...	...	...	...	25·78	25·83	25·78
26·15	27·81	25·32	26·03	21·25	26·62	18·37	10·73	15·60	8·26	22·22	...	26·36	26·19	25·77
24·15	22·31	25·94	25·01	10·15	8·33	33·52	20·91	...	...	...	...	25·70	24·62	25·17
27·82	19·32	29·42	28·85	28·53	34·68	23·72	19·64	...	...	...	...	29·11	27·83	28·49
21·30	18·99	24·99	23·87	18·98	16·40	14·77	19·12	24·82	16·30	61·75	60·38	23·52	25·05	25·79
23·61	24·57	23·85	23·47	14·79	8·02	1·42	2·55	30·62	25·51	461·05	532·42	27·04	27·42	27·22
23·28	22·40	22·23	22·41	10·28	10·23	6·40	5·72	...	25·00	8·95	3·97	21·66	21·67	21 66
12·24	14·77	12·35	11·81	10·46	16·17	3·69	5·79	...	...	141·72	127·77	15·52	15·12	15·33
26·27	29·87	28·92	28·97	15·04	17·26	16·09	16·44	10·45	12·47	74·71	40·46	28 07	28·50	28·27
14·78	14·66	24·50	29·44	1·57	...	19·39	21·29	17·91	9·68	2·63	8·20	17·42	18·11	17·72
10·49	9·06	16·07	14·93	...	27·03	7·87	22·99	...	...	214·28	250·00	12·10	10·76	11·51
10·30	10·86	10·90	9·96	13·33	25·42	...	...	...	...	3·20	1·27	10·44	10·29	10·38
8·02	8·01	11·33	11·92	1,000·00	·00	...	...	...	...	213·33	68·97	8·83	9·02	8·91
11·17	11·26	16·65	16·56	...	...	...	...	...	...	6·15	5·54	12·03	12·13	12·08
10·10	11·24	21·11	22·63	...	...	6·21	8·55	14·93	17·86	6·54	6·39	13·22	14·63	13·86
8·86	9·22	19·39	21·76	...	...	...	...	...	...	4·29	15·79	9·91	10·44	10·15
16·85	17·04	25·80	25·11	14·02	15·61	17·62	17·18	21·90	19·40	38·56	38·68	23·71	23·50	23·61

Hindus of all castes. "Other Classes" include Buddhists, Sikhs, Jews and all others.

ANNUAL FORM No. VI.—DEATHS *registered from different causes in the*
Details regarding Births

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Inju	
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female
	A.—DISTRICTS.													
	Western Registration District.													
1	East Khándesh ...	923,925	19,312	18,203	37,515	40·89	2	94	396	14,057	689	3,579	5	2
2	West Khándesh ...	568,803	11,387	10,647	22,034	38·74	...	5	...	8,193	151	1,733	5	9
3	Násik ...	705,858	14,614	13,831	28,445	40·30	...	26	83	11,111	659	3,624	4	2
4	Thána ...	694,658	11,893	11,087	22,985	33·09	1	41	136	12,139	170	834	19	12
5	Bombay Suburban ...	91,943	800	720	1,520	16·53	...	7	52	1,094	68	105	2	3
6	Kolába ...	533,270	10,440	9,736	20,176	37·83	27	39	10	9,081	292	1,048	8	8
	Central Registration District.													
7	Ahmednagar ...	667,106	12,972	12,197	25,169	37·73	...	23	16	7,419	1,365	3,867	1	3
8	Poona ...	770,334	14,317	13,121	27,438	35·62	8	32	687	9,184	1,270	3,270	10	2
9	Sholápur ...	574,999	11,155	10,516	21,671	37·69	9	...	369	6,810	1,152	1,496	11	3
10	Sátára ...	964,847	19,039	18,110	37,149	38·50	...	12	331	11,347	1,547	1,743	7	16
11	Ratnágiri ...	1,083,350	21,700	20,439	42,139	38·90	2	30	82	9,764	772	4,541	9	6
	Southern Registration District.													
12	Belgáum ...	871,163	17,746	16,431	34,177	39·23	382	32	687	6,127	2,222	2,730	11	10
13	Dhárwár ...	870,565	17,232	16,414	33,646	38·65	766	39	1,651	8,753	734	2,299	14	9
14	Bijápur ...	717,793	13,144	12,692	25,836	35·99	1,063	15	10	7,523	1,323	1,909	15	13
15	Kánara ...	350,246	6,715	6,273	12,988	37·08	82	34	72	4,384	726	558	10	1
	Gujarat Registration District.													
16	Surat ...	526,465	11,254	10,307	21,561	40·95	...	16	53	4,559	296	5,163	8	6
17	Broach ...	243,112	4,992	4,847	8,839	40·47	2	2	...	3,072	155	1,787	3	4
18	Káira ...	604,528	11,416	9,910	21,326	35·28	...	19	...	3,995	356	4,708	9	12
19	Panch Mahális ...	331,791	5,952	5,652	11,604	34·97	...	38	...	2,711	98	744	2	3
20	Ahmedabad ...	568,759	9,207	8,445	17,652	31·04	...	15	...	8,945	360	2,873	8	10
	Sind Registration District.													
21	Karáchi ...	307,576	1,752	1,281	3,033	9·86	25	13	6	2,205	15	104	1	1
22	Hyderabad ...	480,469	4,229	2,962	7,191	14·97	...	...	...	4,151	41	223	5	1
23	Thar and Párkar ...	386,343	3,927	3,118	7,045	18·24	...	4	...	3,315	13	215	5	1
24	Nawábsháh ...	402,915	4,370	3,278	7,648	18·98	...	5	8	3,224	6	67	8	6
25	Larkana ...	562,636	6,802	5,451	12,253	21·78	...	...	...	5,999	14	67	4	5
26	Sukkur ...	394,216	5,209	4,267	9,476	24·04	...	...	...	4,366	14	30	7	4
27	Upper Sind Frontier ...	230,036	2,577	1,989	4,566	19·85	...	...	...	2,127	10	30	12	17
	Total of Districts ...	15,432,717	274,158	251,924	526,082	34·09	2,319	541	4,549	173,686	14,512	49,547	203	172
	B.—TOWNS.													
	East Khándesh District.													
1	Jalgaon ...	23,696	265	263	528	22·29	...	10	...	109	15	50	...	..
2	Bhusáwal ...	24,933	301	272	573	22·98	...	...	...	236	12	55	...	..
3	Chopda ...	16,930	196	149	345	20·38	...	...	81	225	5	44	...	.
4	Dharangaon ...	14,824	218	203	421	28·40	...	...	194	105	10	53	...	..
5	Párola ...	12,079	238	248	486	40·24	...	...	...	151	3	73	...	...
6	Amalner ...	17,069	166	117	283	16·58	...	...	1	82	7	47	...	..
7	Erandol ...	12,469	201	186	387	30·99	...	...	158	150	4	79	...	...
8	Nasirabad ...	12,188	290	282	572	46·93	...	2	...	152	10	86	1	...
9	Chálisgaon ...	11,990	184	149	333	27·77	...	...	...	138	...	40	...	...
	West Khandesh District.													
10	Dhulia ...	30,061	504	542	1,046	34·80	...	...	...	156	50	231	...	...
11	Nandúrbár ...	13,842	177	170	347	25·07	...	1	...	121	5	45	...	1

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1922.*

also shown, column 4.

RIES.				12	13	14 RATIO OF DEATHS PER 1,000 OF POPULATION.										15
Wounding or Accident.	Snake-bite or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-Pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.	No.
188	32	8	235	7,296	26,348	·00	·10	·43	15·13	·74	3·85	·25	7·86	28·36	52·05	1
81	55	3	153	4,607	14,842	...	·01	...	14·40	·26	3·05	·27	8·10	26·09	51·87	2
169	54	7	236	6,870	22,553	...	·04	·05	15·74	·93	5·13	·33	9·73	21·95	53·90	3
167	119	2	319	2,473	16,113	·00	·06	·20	17·47	·24	1·20	·46	3·56	23·19	41·75	4
53	5	...	63	257	1,646	...	·08	·57	11·90	·74	1·14	·68	2·79	17·90	Not available.	5
135	51	4	206	3,244	13,947	·05	·07	·02	17·03	·55	1·96	·39	6 08	26·15	45·98	6
190	25	4	223	7,049	19,992	...	·03	·02	11·17	2·05	5·80	·33	10·57	29·97	45·66	7
261	49	2	324	5,356	20,131	·01	·04	·89	11·92	1·65	4·25	·42	6·95	26·13	46·11	8
217	34	9	274	4,794	14,904	·02	...	·64	11·84	2·00	2·60	·48	8·34	25·92	51·23	9
311	90	8	432	5,460	20,872	...	·01	·34	11·77	1·60	1·80	·45	5·66	21·63	50·02	10
184	281	3	483	6,855	22,479	·00	·03	·03	9·02	·71	4·19	·45	6·33	20·76	31·65	11
331	34	3	389	9,550	22,119	·44	·04	·79	7·03	2·55	3·13	·45	10·96	25·39	42·23	12
241	27	12	303	9,488	22,033	·88	·04	1·89	7·76	·84	2·64	·35	10·90	25·30	43·38	13
231	29	4	292	5,898	18,033	1·48	·02	·01	10·49	1·84	2·66	·41	8·21	25·12	49·15	14
141	13	4	169	4,590	10,565	·09	·10	·21	12·52	2·07	1·59	·48	13·11	30·17	39·05	15
145	22	7	188	2,864	13,139	...	·03	·10	8·66	·56	9·81	·36	5·44	24·96	41·25	16
68	14	2	91	1,527	6,636	·01	·01	...	12·64	·64	7·35	·37	6·28	27·30	47·10	17
243	72	11	347	3,183	12,608	...	·03	...	6·61	·59	7·79	·57	5·27	20·86	41·95	18
85	41	4	135	1,427	5,153	...	·11	....	8·17	·30	2·24	·41	4·30	15·53	32·12	19
187	91	23	269	2,305	14,767	...	·03	...	15·73	·63	5·05	·47	4·06	25·97	44·36	20
56	14	2	74	180	2,622	·08	·04	·02	7·17	·05	·34	·24	·58	8·52	23·24	21
49	44	...	99	154	4,668	...	...	...	8·64	·09	·46	·21	·32	9·72	30·98	22
58	85	...	149	242	3,939	...	·01	...	8·58	·03	·56	·39	·63	10·20	33·63	23
62	32	...	108	183	3,601	...	·01	·02	8·01	·01	·17	·27	·45	8·94	33·94	24
122	42	...	176	209	6,465	...	...	...	10·67	·02	·12	·31	·37	11·49	30·69	25
65	27	...	103	127	4,640	...	...	...	11·07	·04	·08	·26	·32	11·77	34·62	26
32	10	...	71	45	2,283	...	...	...	9·25	·04	·13	·31	·20	9·93	33·45	27
4,022	1,392	122	5,911	96,233	347,098	·15	·04	·29	11·25	·94	3·20	·38	6·24	22·49	42·50	
6	1	...	7	175	366	...	·42	...	4 60	·63	2·11	·30	7·39	15·45	42·69	1
4	...	...	4	121	428	...	...	...	9·47	·48	2·21	·16	4·85	17·17	40·00	2
3	...	...	3	67	425	...	...	4·78	13·29	·20	2·60	·18	3·96	25·10	43·43	3
14	1	...	15	154	531	...	...	13·99	7·08	·67	3·58	1·01	10·39	35.82	39·36	4
2	...	2	4	65	296	...	...	...	12·50	·25	6·04	·33	5·38	24·50	42·06	5
3	...	...	3	53	193	...	...	·05	4·80	·41	2·75	·18	3·11	11·30	41·40	6
2	...	...	2	94	487	...	...	12·65	12·01	·32	6·33	·16	7·53	39·00	48·05	7
1	...	...	2	119	371	...	·16	...	12·47	·82	7·06	·16	9·77	30·44	49·13	8
6	...	...	6	49	233	...	...	...	11·51	.....	3·34	·50	4·09	19·44	38·74	9
12	...	...	12	228	677	...	...	...	5·19	1·66	7·68	·40	7·59	22·52	42·65	10
4	...	1	6	112	290	...	·07	...	8·74	·36	3·25	·44	8·09	20·95	45·02	11

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Inju	
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	B.—Towns—*contd.*													
	Nasik District.													
12	Násik ...	42,715	631	586	1,217	28·49	...	3	2	239	59	392	1	...
13	Yeola ...	13,911	226	166	392	28·18	..	...	...	327	18	125	...	...
14	Málegaon ...	23,711	446	385	831	35·05	...	1	...	262	10	76	...	...
15	Igatpuri ...	9,977	87	75	162	16·24	...	...	...	46	10	30	1	...
16	Manmád ...	11,866	76	80	156	13·15	...	1	...	61	7	32	...	...
17	Trimbak ...	4,538	64	73	137	30·19	...	...	...	20	...	23	...	...
18	Deoláli Cantonment ...	12,640	39	24	63	4·98	...	...	...	4	3	50	..	...
	Thana District.													
19	Thána ...	22,116	229	223	452	20·44	1	6	89	187	20	119	3	1
20	Bhiwandi ...	12,188	236	216	452	37·09	...	...	5	47	13	126	...	...
21	Kalyán ...	17,573	243	176	419	23·84	...	...	72	185	20	90	...	...
22	Bassein ...	10,364	161	119	280	27·02	...	1	54	96	13	52	...	...
	Bombay Suburban District.													
23	Bándra ...	28,738	395	325	720	25·06	...	...	33	72	38	107	...	1
24	Kurla ...	26,059	189	159	348	13·35	...	...	2	298	27	36	...	...
25	Santcruz ...	4,701	7	3	10	2·13	...	...	...	3	...	2	...	...
	Kolaba District.													
26	Alibág ...	5,253	53	46	99	18·85	...	...	...	31	3	18	...	...
27	Panwel ...	8,622	91	91	182	21·11	...	...	...	144	3	19	...	...
28	Mahád ...	7,192	98	79	177	24·61	...	...	...	52	3	20	...	...
29	Uran ...	8,135	70	48	118	14·51	...	...	...	47	4	15	...	...
30	City of Bombay ...	1,148,815	10,224	9,931	20,155	17·54	14	60	629	4,136	3,687	14,856	44	18
	Ahmednagar District.													
31	Ahmednagar ...	33,138	539	415	954	28·79	...	...	1	85	34	302	...	...
32	Sangamner ...	12,737	194	170	364	28·58	...	...	...	91	5	25	...	...
33	Ahmednagar Cantonment ...	10,997	127	107	234	21·28	...	...	...	89	9	63	...	...
	Poona District.													
34	Poona City ...	133,122	732	689	1,421	10·67	...	143	478	1,139	266	2,484	...	...
35	Poona Suburban ...	13,971	111	105	216	15·46	...	...	6	137	21	57	...	...
36	Bárámati ...	11,905	141	121	262	22·01	...	...	...	97	27	21	...	...
37	Khed ...	7,013	94	105	199	38·38	...	...	...	36	5	26	...	...
38	Lonávla ...	10,471	135	86	221	21·11	...	...	45	88	8	58	...	...
39	Junnár ...	7,376	108	75	183	24·81	...	10	...	58	7	30	...	...
40	Poona Cantonment ...	25,498	48	41	89	3·49	1	2	9	111	25	119	...	...
41	Kirkee do. ...	7,991	66	68	134	16·77	...	...	43	41	32	126	...	...
	Sholapur District.													
42	Sholápur ...	119,347	2,259	2,085	4,344	36·40	8	...	2	2,053	159	422	...	...
43	Bársi ...	22,074	375	310	685	31·03	...	...	15	560	35	47	...	...
44	Pandharpur ...	25,210	364	303	667	26·46	...	...	2	549	88	131	1	...
	Satara District.													
45	Sátara ...	22,454	186	163	349	15·54	2	5	...	210	23	92	2	...
46	Wái ...	10,208	161	136	297	29·09	...	...	...	54	19	64	...	...
47	Karád ...	11,255	103	92	195	17·33	...	...	...	34	4	9	...	...
48	Ashta ...	9,016	129	128	257	28·50	...	...	...	90	20	4	...	...
49	Islámpur ...	7,915	108	99	207	26·15	...	...	...	23	17	50	...	...
	Ratnagiri District.													
50	Ratnágiri ...	18,286	210	192	402	21·98	...	9	1	95	28	56	...	...
51	Vengurla ...	19,126	346	294	640	33·46	...	...	1	117	115	104	...	...
52	Málwan ...	22,213	267	232	499	22·46	...	...	...	107	21	96	1	...
53	Chiplun ...	11,005	181	146	327	29·71	...	...	...	83	6	48	...	...

No. VI—*continued.*

RIES.				12	13	14										15
						Ratio of Deaths per 1,000 of population.										
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.		No.
														For the year.	Mean of previous five years.	
13	2	1	17	440	1,152	...	·07		5·59	1·38	9·18	·40	10·30	26·97	50·67	12
5	1	...	6	38	514	...	...		23·50	1·30	8·99	·43	2·73	36·95	47·26	13
3	1	...	4	139	492	...	·04	...	11·05	·42	3·21	·17	5·86	20·75	53 78	14
11	...	...	12	21	119	...	...		4·61	1·00	3·01	1·20	2·11	11·93	25·25	15
2	...	...	2	32	135	...	·08		5·14	·59	2·70	·17	2·70	11·38	33·64	16
1	...	...	1	43	87	...	...	...	4·41	.....	5·07	·22	9·48	19·18	43·88	17
2	...	...	2	40	99	...	...	...	·32	·24	3·95	·16	3·16	7·83	58·97	18
25	1	...	30	156	608	·05	·27	4·02	8·46	·90	5·38	1·36	7·05	27·49	46·99	19
9	...	...	9	109	309	...	...	·41	3·85	1·07	10·34	·74	8·94	25·35	33·95	20
7	...	...	7	122	496	...	...	4·10	10·53	1·14	5·12	·40	6·94	28·23	29·32	21
3	...	...	3	94	313	...	·10	5·21	9·26	1·25	5·02	·29	9·07	30·20	36·06	22
9	1	...	11	256	517	...	...	1·15	2·51	1·32	3·72	·38	8·91	17·99	32·55	23
4	...	...	4	58	425	...	...	·08	11·44	1·04	1·38	·15	2·22	16·31	33·09	24
1	...	...	1	1	7	...	...	...	·64	.....	·43	·21	·21	1·49	Not available.	25
1	...	...	1	41	94	...	...	...	5·90	·57	3·43	·19	7·81	17·90	41·28	26
4	1	...	5	19	190	...	...	...	16·70	·35	2·20	·58	2·20	22·03	26·97	27
1	...	...	1	55	131	...	...	...	7·23	·42	2·78	·14	7·65	18·22	29·30	28
2	...	...	2	29	97	...	...	...	5·78	·49	1·84	·25	3·56	11·92	23·51	29
774	...	...	836	12,707	36,925	·01	·05	·55	3·60	3·21	12·92	·73	11·06	32·13	51·43	30
6	...	...	6	180	608	...	...	·03	2·57	1·03	9·11	·18	5·43	18·35	45·38	31
2	...	...	2	77	200	...	...	...	7·14	·39	1·96	·16	6·05	15·70	33·06	32
...	...	...	...	61	222	...	...	...	8·09	·82	5·73	...	5·55	20·19	36·44	33
25	1	1	27	1,166	5,703	...	1·07	3·59	8·56	2·00	18·66	·20	8·76	42·84	57·57	34
3	1	1	5	41	267	...	...	·43	9·81	1·50	4·08	·36	2·93	19·11	Not available.	35
3	...	...	3	66	214	...	...	...	8·14	2·27	1·78	·25	5·54	17·98	45·77	36
5	2	...	7	62	136	...	...	...	5·13	·71	3·71	1·00	8·84	19·39	31·85	37
12	1	...	13	90	302	...	...	4·30	8·40	·76	5·54	1·24	8·60	28·84	34·52	38
1	1	...	2	36	143	...	1·36	...	7·86	·95	4·07	·27	4·88	19·39	29·10	39
1	...	...	1	81	349	·04	·08	·35	4·35	·98	4·67	·04	3·18	13·69	17·56	40
5	...	...	5	54	301	...	...	5·38	5·14	4·00	15·76	·63	6·76	37·67	39·09	41
33	1	1	35	1,048	3,727	·07	·00	·02	17·20	1·33	3·54	·29	8·78	31·23	80·21	42
16	...	...	16	142	815	...	...	·68	25·37	1·59	2·13	·72	6·43	36·92	55·80	43
10	...	1	12	316	1,093	...	...	·08	21·78	3·49	5·19	·48	12·53	43·55	57·74	44
8	1	1	12	170	514	·09	·22	...	9·35	1·02	4·10	·54	7·57	22·89	41·98	45
7	1	...	8	65	210	...	...	...	5·29	1·86	6·27	·78	6·37	20·57	37·20	46
1	...	1	2	23	72	...	...	...	3·02	·36	·80	·18	2·04	6·40	28·33	47
3	...	...	3	26	143	...	...	...	9·98	2·22	·44	·33	2·89	15·86	31·31	48
6	...	...	6	55	151	...	...	...	2·91	2·15	6·31	·76	6·95	19·08	37·75	49
6	1	...	7	94	290	...	·49	·06	5·20	1·53	3·06	·38	5·14	15·86	25·49	50
5	...	3	8	185	530	...	...	·05	6·12	6·01	5·44	·42	9·67	27·71	31·34	51
7	4	...	12	181	417	...	...	...	4·82	·94	4·32	·54	8·15	18·77	26·50	52
4	...	...	4	41	182	...	...	...	7·54	·55	4·36	·36	3·73	16·54	27·25	53

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Injuries.	
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
													Male.	Female.
	B.—Towns—*contd.*													
	Belgaum District.													
54	Belgaum ...	36,214	589	538	1,127	31·12	...	7	703	221	42	152	1	...
55	Gokak ...	9,989	205	198	403	40·34	...	...	...	45	34	38	...	2
56	Athni ...	13,538	178	197	375	27·70	2	2	...	80	29	43	...	...
57	Nipani ...	11,878	190	191	381	32·07	...	...	...	57	17	47	...	...
58	Belgaum Cantonment.	6,880	14	9	23	3·34	...	1	40	2	2	14	...	...
	Dharwar District.													
59	Dharwar ...	34,327	450	467	917	26·71	52	...	463	237	72	206	6	1
60	Hubli ...	69,140	1,084	946	2,030	29·36	64	...	7	305	79	322	1	1
61	Gadag-Bettigeri ...	41,158	852	771	1,623	39·43	118	...	1	250	24	155	1	...
62	Ranebennur ...	13,930	283	273	556	39·91	...	...	15	30	19	67	...	...
63	Nawalgund ...	7,089	113	106	219	30·89	3	...	1	40	9	14	1	...
	Bijapur District.													
64	Bijapur ...	32,471	538	497	1,017	31·32	13	...	...	55	30	183	...	...
65	Bagalkot ...	19,471	373	333	706	36·26	71	...	...	113	35	77	...	...
66	Guledgudd ...	14,760	352	322	674	45·66	86	...	...	87	5	59	1	...
67	Ilkal ...	11,856	220	201	421	35·51	9	...	...	62	5	59	...	...
	Kanara District.													
68	Karwar ...	14,463	203	160	363	25·10	...	...	...	45	5	15	...	...
69	Kumta ...	14,291	180	187	367	25·68	4	6	...	58	25	26	...	...
70	Gokarn ...	8,307	140	120	260	31·30	...	...	...	9	19	50	...	...
71	Honawar ...	7,035	99	117	216	30·70	...	...	...	48	19	9	...	...
72	Bhatkal ...	7,134	135	122	257	36·02	...	2	...	73	20	15	...	...
	Surat District.													
73	Surat ...	1,17,428	1,694	1,432	3,126	26·62	1	149	1	237	297	1,656	2	3
74	Bulsar ...	19,681	273	197	470	23·88	...	...	...	94	6	67	1	...
75	Rander ...	10,547	107	104	211	20·01	...	...	...	102	9	45	...	...
	Broach District.													
76	Broach ...	42,626	879	908	1,787	41·92	...	...	1	94	47	461	1	3
77	Jambusar ...	10,217	225	196	421	41·21	...	...	...	116	8	83	...	...
78	Ankleshwar ...	11,756	236	207	443	37·68	...	...	...	208	1	50	...	...
	Kaira District.													
79	Kaira ...	8,277	114	107	221	26·70	...	...	...	54	8	53	...	...
80	Mehmadabad ...	6,236	134	114	248	39·77	...	...	...	84	4	40	...	...
81	Nadiad ...	31,919	580	451	1,031	32·30	...	...	...	406	8	275	1	...
82	Borsad ...	12,113	317	277	594	49·04	...	...	...	72	46	70	...	...
83	Anand ...	11,024	171	134	305	27·67	...	...	...	140	7	...	...	...
84	Umreth ...	14,024	297	303	600	42·78	...	1	...	114	6	151	1	...
85	Dakore ...	7,990	125	151	276	34·54	...	1	...	61	20	86	1	...
86	Kapadvanj ...	14,794	295	234	529	35·76	...	...	...	60	6	215	...	...
	Panch Mahals District.													
87	Godhra ...	26,969	197	201	398	14·76	...	...	...	204	4	13	...	...
88	Dohad ...	16,071	254	268	522	32·48	...	...	...	250	4	2	...	...
	Ahmedabad District.													
89	Ahmedabad ...	2,70,599	5,059	4,689	9,748	36·02	...	...	1	1,611	307	4,431	3	...
90	Dhandhuka ...	8,056	157	154	311	38·60	...	...	...	121	3	52	...	...
91	Viramgaon ...	26,252	331	298	629	23·96	...	...	1	348	7	245	...	...
92	Dholka ...	12,513	286	246	532	42·52	...	...	...	186	8	62	...	...
93	Ahmedabad Cantonment.	1,745	5	7	12	6·88	...	...	...	14	...	1	...	...

No. VI—*continued.*

RIES.				12	13	14										15
						Ratio of Deaths per 1,000 of population.										
Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.		No.
														For the year.	Mean of previous five years.	
93	...	1	25	456	1,606	...	·20	19·41	6·10	1·16	4·20	·69	12·59	44·35	34·58	54
2	...	...	4	104	225	...	...	...	4·51	3·40	3·80	·40	10·41	22·52	44·89	55
2	1	...	3	51	210	·15	·15	...	5·90	2·14	3·18	·22	3·77	15·51	31·62	56
2	...	...	2	85	208	...	...	...	4·80	1·43	3·95	·17	7·16	17·51	27·69	57
1	...	...	1	50	110	...	·15	5.81	·29	·29	2·03	·15	7·27	15·99	19·32	58
13	...	1	21	426	1,477	1·52	...	13·49	6·90	2·10	6·00	·61	12·41	43·03	35·16	59
14	...	5	21	776	1,574	·93	...	·10	4·41	1·14	4·66	·30	11·23	22·77	38·57	60
13	2	...	16	538	1,102	2·37	...	·02	6·07	·58	3·77	·39	13·07	26·77	46·20	61
11	...	...	11	240	382	...	...	1·08	2·15	1·36	4·81	·79	17·23	27·42	55·61	62
3	...	...	4	61	132	·42	...	·14	5·64	1·27	1·98	·56	8·61	18·62	25·34	63
14	...	...	14	363	658	·40	...	...	1·69	·92	5·64	·43	11·18	20·36	36·42	64
6	1	...	7	245	548	3·65	...	...	5·80	1·80	3·95	·36	12·58	28·14	52·23	65
6	...	...	7	210	454	5·83	...	...	5·89	·94	4·00	·47	14·23	30·75	31·20	66
1	1	...	2	214	351	·76	...	...	5·24	·42	4·97	·17	18·05	29·61	51·08	67
3	...	...	3	93	161	...	...	...	3·11	·34	1·04	·21	6·43	11·13	16·46	68
3	...	...	3	113	235	·28	·42	...	4·06	1·75	1·82	·21	7·90	16·44	27·45	69
4	...	...	4	105	187	...	...	...	1·08	2·29	6·02	·48	12·64	22·51	39·44	70
2	...	...	2	50	128	...	...	...	6·82	2·70	1·28	·28	7·11	18·19	25·66	71
2	...	...	2	45	157	...	·28	...	10·23	2·80	2·10	·28	6·31	22·00	25·74	72
34	...	1	40	1,365	3,746	·01	1·27	·01	2·02	2·53	14·10	·34	11·62	31·90	39·12	73
2	...	1	4	122	293	...	...	...	4·78	·30	3·40	·20	6·20	14·88	24·61	74
...	...	...	...	48	204	...	...	...	9·67	·85	4·27	...	4·55	19·34	35·42	75
23	2	...	28	551	1,182	...	...	·02	2·21	1·10	10·81	·66	12·93	27·73	42·28	76
7	3	...	10	30	247	...	...	...	11·36	·78	8·12	·98	2·94	24·18	44·58	77
2	...	...	2	51	312	...	...	...	17·69	·09	4·25	·17	4·34	26·54	35·23	78
4	3	1	8	43	166	...	..	...	6·52	·97	6·10	·97	5·20	20·06	54·37	9
4	...	...	4	50	192	...	...	...	13·47	·64	6·41	·64	8·02	29·18	42·99	80
16	...	...	17	159	865	...	...	...	12·72	·25	8·62	·53	4·98	27·10	50·84	81
2	...	...	2	191	381	...	...	...	5·94	3·79	5·78	·17	15·77	31·45	46·78	82
1	...	...	1	39	187	...	...	...	12·70	·63	...	·09	3·54	16·96	38·58	83
16	...	...	17	124	413	...	·07	...	8·13	·43	10·77	1·21	8·84	29·45	45·70	84
8	...	...	9	56	233	...	·13	...	7·63	2·50	10·76	1·13	7·01	29·16	51·38	85
6	...	...	6	77	364	...	...	...	4·05	·41	14·53	·41	5·20	24·60	47·31	86
4	...	...	4	35	260	...	...	...	7·56	·15	·48	·15	1·30	9·64	26·28	87
...	1	...	1	75	332	...	...	...	15·56	·25	·12	·06	4·67	20·66	51·46	88
137	1	12	153	2,631	9,134	...	...	·00	5·96	1·13	16·37	·57	9·72	33·75	57·04	89
3	1	...	4	31	211	...	...	...	15·02	·37	6·45	·50	3·85	26·19	60·51	90
1	...	...	1	49	651	...	...	·04	13·26	·27	9·33	·04	1·86	24·80	50·18	91
2	1	...	3	67	326	...	...	...	14·86	·64	4·96	·24	5·35	26·05	53·61	92
1	...	...	1	...	16	...	...	...	8·03	.....	·57	·57	...	9·17	34·37	93

ANNUAL FORM

1	2	3	4				5	6	7	8	9	10	11	
			Births.										Inju	
No.	Districts and Towns.	Papulation according to Census of 1921.	Male.	Female.	Total.	Birth rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentry and Diarrhœa.	Respiratory. Diseaes.	Suicide.	
													Male.	Female.
	Karachi District.													
94	Karachi	199,014	3,641	3,331	6,972	35·03	...	187	664	1,165	134	1,294	1	...
95	Tatta	8,470	76	79	155	18·30	...	...	1	50	4	50	...	...
96	Kotri	9,072	62	46	108	11·90	...	...	...	78	3	20	..	...
97	Karachi Cantonment .	6,525	123	99	222	34·02	...	1	2	30	...	4	...	...
	Hyderabad District.													
98	Hyderabad ...	72,625	1,557	1,515	3,072	42·30	...	5	4	445	80	693	1	...
99	Halla	5,757	82	55	137	23·80	...	...	...	60	...	2	...	...
100	Matiari	4,638	71	58	129	27·81	...	...	...	11	1	13	...	...
101	Hyderabad Cantonment.	3,760	22	13	35	9·31	...	1	...	11	...	...	...	...
	Thar and Parkar District.													
102	Umarkot ...	4,199	34	31	65	15·48	...	...	...	19	3	20	...	...
103	Mirpurkhas ...	5,765	35	25	60	10·41	...	...	...	62	4	44	...	...
	Nawabshah District.													
104	Nswabshah ...	2,771	31	15	46	16·60	...	...	...	14	...	2	1	...
105	Tando Adam ...	12,966	120	107	227	17·51	...	...	1	86	...	16	...	...
	Larkana District.													
106	Larkana ...	17,700	273	252	525	29·66	...	1	...	219	13	21	...	...
107	Kambar	7,613	56	55	111	14·58	...	...	...	78	...	...	...	...
108	Ratodero ...	5,565	103	100	203	36·48	...	...	...	108	2	3	...	...
109	Sehwan	4,423	38	33	71	16·05	...	...	...	28	...	27	...	...
	Sukkur District.													
110	Sukkur	42,046	630	528	1,158	27·54	...	1	1	481	10	24	...	...
111	Shikarpur	55,347	886	594	1,480	26·74	...	8	...	631	15	46	4	...
112	Rohri	11,378	188	155	343	30·15	...	...	...	151	5	18	...	...
113	Gari Yasin	6,375	103	78	181	28·39	...	...	...	123	1	...	...	...
	Upper Sind Frontier District.													
114	Jacobabad	10,578	119	83	202	19·10	...	2	...	130	2	4	...	...
	Total of Towns ...	3,732,897	49,473	45,215	94,688	25·37	449	629	3,830	24,202	6,606	33,335	82	30
	Total for the Presidency.	19,165,614	323,631	297,139	620,770	32·39	2,768	1,170	8,379	197,888	21,118	82,682	285	202

No. VI—*concluded.*

RIES.				12	13	14										15
						Ratio of Deaths per 1,000 of population.										
Wounding or Accident.	Snake-bite, or killed by wild beasts,	Babies,	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.		No
														For the year.	Mean of previous five years.	
94	...	2	97	2,889	6,430	...	·94	3·34	5·85	·67	6·50	·49	14·52	32·31	50·71	94
4	...	...	4	51	160	...	...	·12	5·90	·47	5·90	·47	6·03	18·89	32·91	95
1	1	...	2	10	113	...	...	...	8·60	·33	2·21	·22	1·10	12·56	37·28	96
2	...	...	2	39	78	...	·15	·31	4·60	.....	·61	·31	5·97	11·95	33·20	97
44	3	...	48	429	1,704	...	·07	·05	6·13	1·10	9·54	·66	5·91	23·46	42·66	98
1	...	...	1	2	65	...	...	...	10·42	.....	·35	·17	·35	11·29	22·71	99
1	2	1	4	35	65	...	...	...	2·37	·92	2·80	·86	7·76	14·01	47·80	100
...	...	...	...	14	26	...	·27	...	9·93	.....	...	...	3·72	6·92	18·19	101
2	...	...	2	10	54	...	...	...	4·53	·71	4·76	·48	2·38	12·86	48·52	102
...	3	...	3	5	118	...	...	...	10·76	·69	7·63	·52	·87	20·47	44·80	103
1	...	...	2	1	19	...	...	...	5·05	.....	·72	·72	·36	6·85	31·52	104
1	1	...	2	6	111	...	...	·08	6·63	.....	1·23	·16	·46	8·56	29·80	105
2	...	...	2	208	464	...	·06	...	12·37	·73	1·19	·11	11·75	26·21	48·42	106
1	...	...	1	4	·83	...	...	...	10·25	.....	...	·13	·52	10·90	44·40	107
2	...	...	2	5	120	...	...	...	19·40	·36	·54	·36	·90	21·56	43·92	108
...	...	...	...	34	89	...	...	...	6·33	.....	6·10	...	7·69	20·12	41·53	109
25	3	...	28	110	655	...	·02	·02	11·44	·24	·57	·67	2·62	15·58	38·69	110
9	...	...	13	725	1,438	...	·14	...	11·40	·27	·83	·24	13·10	25·98	48·26	111
2	1	...	3	19	196	...	...	...	13·27	·44	1·58	·27	1·67	17·23	49·88	112
2	...	...	2	...	126	...	...	...	19·29	·16	...	·32	...	19·77	49·14	113
...	...	...	...	20	158	...	·19	...	12·29	·19	·38	...	1·89	14·94	32·13	114
1,695	54	38	1,899	34,533	1,05,483	12	·17	1·03	6·48	1·77	8·93	·51	9·25	28·26	46·39	
5,717	1,446	160	7,810	1,30,766	452,581	14	·06	·44	10·33	1·10	4·31	·41	6·82	23·61	43·20	

ANNUAL FORM No. VI (*a*)—DEATHS *registered from certain diseases in the*

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	A.—DISTRICTS.													
	Western Registration District.													
1	East Khándesh	928,925	...	...	53	·06	...	...	...	...	52	·06	13,931	14·99
2	West Khándesh	568,809	...	...	126	·22	...	...	...	...	...	...	8,060	14·17
3	Násik	705,858	...	...	33	·05	...	...	...	...	4	·01	11,028	15·62
4	Thána	694,658	...	...	3	·00	...	...	...	...	11	·01	12,087	17·40
5	Bombay Suburban	91,943	...	...	...	...	...	...	...	...	15	·16	1,079	11·74
6	Kolába	533,270	...	...	31	·06	...	...	...	...	8	·02	9,040	16·95
	Central Registration District.													
7	Ahmednagar	667,106	47	·07	81	·12	4	·01	...	...	3,062	4·59	4,165	6·24
8	Poona	770,334	49	·06	70	·09	...	...	...	...	3,669	4·76	5,382	6·99
9	Sholápur	574,999	16	·03	40	·07	...	...	...	...	246	·42	6,458	11·23
10	Sátára	964,847	30	·03	122	·13	...	...	...	...	259	·27	10,920	11·32
11	Ratnágiri	1,083,350	22	·02	78	.07	...	...	...	...	113	·11	9,532	8·80
	Southern Registration District.													
12	Belgaum	871,163	306	·35	283	·32	...	...	...	...	1,912	2·19	3,582	4·11
13	Dhárwár	870,565	256	·29	217	·25	...	...	...	...	1,434	1·65	4,821	5·54
14	Bijápur	717,798	40	·06	263	·37	...	...	...	...	836	1·17	6,376	8·88
15	Kánara	350,246	297	·85	10	·03	...	...	...	...	1,507	4·30	2,554	7·29
	Gujarat Registration District.													
16	Surat	526,465	...	...	10	·02	...	...	...	...	34	·07	4,508	8·56
17	Broach	243,112	...	...	2	·01	...	...	...	...	5	·02	3,065	12·61
18	Kaira	604,528	...	...	54	·09	...	...	...	...	...	...	3,941	6·52
19	Panch Mahals	331,791	...	...	8	·02	...	...	...	...	4	·01	2,699	8·14
20	Ahmedabad	568,759	...	...	41	·07	...	...	...	...	59	·10	8,841	15·55
	Sind Registration District.													
21	Karáchi	307,576	49	·16	...	...	...	...	...	...	1,841	5·99	315	1·02
22	Hyderabad	480,469	43	·09	1	·00	...	...	...	...	1,517	3·16	2,590	5·39
23	Thar and Párkar	386,343	108	·28	7	·02	...	...	...	...	2,457	6·36	744	1·92
24	Nawábshah	402,915	70	·17	3	·01	...	...	...	...	2,182	5·42	969	2·41
25	Lárkana	562,636	78	·14	9	·02	...	...	...	...	4,464	7·93	1,444	2·57
26	Sukkur ... —	394,216	36	·09	1	·00	...	...	...	...	3,265	8 28	1,020	2·59
27	Upper Sind Frontier	230,036	17	·07	...	...	...	...	...	...	1,626	7·07	484	2.11
	Total of Districts ...	15,432,717	1,464	·09	1,546	·10	4	·00	...	...	30,583	1·98	130,635	9·05
	B.—TOWNS.													
	East Khandesh District.													
1	Jalgaon	23,696	...	...	12	·51	...	...	...	...	1	·04	96	4·05
2	Bhusáwal	24,933	...	...	4	·16	...	...	...	...	...	...	231	9·27
3	Chopda	16,930	...	...	1	·06	...	...	...	...	...	...	127	7·50
4	Dharangaon	14,824	...	...	...	...	...	...	...	...	...	...	105	7·08
5	Parola	12,079	...	...	...	...	...	...	...	...	...	...	151	12·50
6	Amálner	17,068	...	...	...	...	...	...	...	...	...	...	82	4·80
7	Erandol	12,489	...	...	...	...	...	...	...	...	...	...	150	12·01
8	Nasirabad	12,188	...	...	...	...	...	...	...	...	...	...	152	12·47
9	Chálisgaon	11,990	...	...	...	...	...	...	...	...	...	...	138	11·51
	West Khandesh District.													
10	Dhulia	30,061	...	...	12	·40	...	...	...	...	...1	·03	141	4·69
11	Nandurbar	13,842	...	...	2	·14	...	...	...	...	...	...	119	8·60
	Nasik District.													
12	Násik	42,715	...	...	5	·12	2	·04	...	...	...	...	227	5·31
13	Yeola	13,911	...	...	2	·14	...	...	...	...	...	...	325	23·36

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1922.*

10		11		12		13		14		15		16	17			18	19
Influenza.		Pneumonia.		Phthisis.		Other Respiratory Diseases.		Dysentery.		Diarrhœa.		Deaths under 1 year.					
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths from child birth.	Male.	Female.	Total.	Infant mortality rate per 1,000 births.	
21	·02	37	·04	91	·10	3,451	3·71	41	·04	648	·70	288	3,919	3,262	7,181	191·42	1
7	·01	2	·00	60	·11	1,671	2·94	21	·03	130	·23	246	2,193	1,875	4,068	184·62	2
46	·06	26	·04	121	·17	3,477	4·92	33	·05	620	·88	287	3,038	2,541	5,579	196·13	3
38	·05	28	·04	323	·46	483	·70	50	·07	120	·17	148	1,632	1,386	3,018	131·30	4
...	...	7	·08	55	·59	43	·47	14	·15	54	·59	45	110	99	209	137·50	5
2	·00	16	·03	795	1·49	237	·44	39	·07	253	·48	162	1,688	1,339	3,027	150·03	6
90	·14	12	·02	244	·37	3,611	5·41	220	·33	1,145	1·72	110	2,652	2,067	4,719	157·49	7
14	·02	24	·03	554	·72	2,692	3·50	61	·08	1,209	1·57	87	2,507	1,997	4,504	164·15	8
50	·09	5	·01	171	·30	1,330	2·29	24	·04	1,128	1·96	100	2,208	1,768	3,976	183·47	9
16	·02	20	·02	398	·41	1,325	1·37	38	·04	1,509	1·56	174	2,887	2,439	5,326	143·37	10
19	·02	6	·01	2,733	2·52	1,802	1·66	576	·53	196	·18	190	1,819	1,494	3,313	78·62	11
44	·06	24	·03	577	·66	2,129	2·44	475	·55	1,747	2·00	169	2,607	2,005	4,612	134·94	12
25	·03	2	·00	498	·57	1,799	2·07	100	·11	634	·73	159	2,669	2,106	4,775	141·93	13
7	·01	1	·00	284	·40	1,624	2·26	252	·35	1,071	1·49	97	2,000	1,663	3,668	141·97	14
16	·05	2	·01	212	·60	344	·98	186	·53	540	1·54	263	1,396	1,170	2,566	197·57	15
7	·01	1,103	2·10	528	1·00	3,532	6·71	135	·26	161	·30	24	1,793	1,578	3,371	156·35	16
...	...	322	1·33	205	·84	1,260	5·18	5	·02	150	·62	21	962	896	1,858	188·84	17
...	...	262	·44	884	1·46	3,562	5·89	84	·14	272	·45	27	1,573	1,466	3,039	142·50	18
...	...	65	·19	139	·42	540	1·63	2	·01	96	·29	61	603	553	1,156	99·62	19
4	·01	450	·79	803	1·42	1,615	2·84	121	·21	239	·42	26	1,505	1,294	2,799	158·57	20
...	...	47	·15	45	·15	12	·04	3	·01	12	·04	34	292	232	524	172·77	21
...	...	164	·34	31	·06	28	·06	22	·05	19	·04	65	551	429	980	136·23	22
...	...	149	·39	38	·10	28	·07	6	·01	7	·02	68	413	369	782	111·00	23
...	...	30	·07	10	·03	27	·07	4	·01	2	·00	96	494	402	896	117·15	24
4	·01	28	·05	14	·03	25	·04	12	·02	2	·00	117	809	718	1,527	124·62	25
44	·11	4	·01	10	·03	16	·04	8	·02	6	·02	60	793	680	1,473	155·45	26
...	...	19	·08	4	·02	7	·03	1	·00	9	·04	31	309	280	588	128·76	27
4,54	·03	2,855	·18	9,832	·64	26·660	2·38	2,533	·16	11,979	·78	3,155	43,421	36,113	79,534	151·18	
...	...	5	·21	8	·34	37	1·56	2	·08	13	·55	9	54	49	103	105·08	1
1	·04	3	·12	6	·24	46	1·85	...	...	12	·48	9	81	47	128	223·39	2
97	5·73	...	...	1	·06	43	2·54	...	...	5	·29	7	26	22	48	139·13	3
...	...	...	...	3	·20	50	3·38	1	·07	9	·60	4	38	43	81	192·40	4
...	...	...	...	...	...	73	6·04	...	...	3	·25	9	42	38	80	164·61	5
...	...	...	...	1	·06	46	2·69	...	...	7	·41	3	16	17	33	116·61	6
...	...	1	·08	23	1·84	55	4·41	2	·16	2	·16	9	61	37	98	253·23	7
...	...	...	...	1	·08	85	6·98	...	...	10	·82	2	54	54	108	188·81	8
...	...	...	...	1	·09	39	3·25	...	...	...	...	4	32	32	64	192·19	9
2	·07	71	2·36	45	1·50	115	3·82	5	·16	45	1·50	37	44	68	112	107·07	10
...	...	1	·07	5	·36	39	2·82	1	·07	4	·29	10	40	30	70	201·73	11
5	·12	26	·61	112	2·62	254	5·95	8	·19	51	1·19	36	169	116	285	234·18	12
...	...	1	·07	8	·58	116	8·34	4	·29	14	1·01	13	67	66	133	339·29	13

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Nasik District—concluded.													
14	Málegaon	23,711	...	...	...	...	...	...	...	...	...	...	262	11·05
15	Igatpuri	9,977	...	...	...	...	...	...	...	...	...	...	46	4·61
16	Manmad	11,866	...	...	...	...	...	...	...	...	...	...	61	5·14
17	Trimbak	4,538	...	...	...	...	...	...	...	...	...	...	20	4·41
18	Deolali Cantonment	12,640	...	...	...	...	...	...	...	...	1	·08	3	·24
	Thana District.													
19	Thána	22,116	1	·05	...	...	...	...	...	...	...	...	186	8·41
20	Bhiwandi	12,188	...	...	1	·08	...	...	...	...	1	·08	45	3·69
21	Kalyán	17,573	...	...	...	...	...	...	...	...	14	·80	171	9·73
22	Bassein	10,364	...	...	...	...	...	...	...	...	...	...	96	9·26
	Bombay Suburban District.													
23	Bandra	28,738	...	·00	1	·04	...	...	...	...	22	·76	49	1·71
24	Kurla	26,059	...	...	...	...	...	...	...	...	...	...	298	11·44
25	Santacruz	4,701	...	...	...	...	...	...	...	...	...	...	3	·64
	Kolaba District.													
26	Alibág	5,253	...	...	1	1·19	...	...	...	...	...	...	30	5·71
27	Panwel	8,622	...	...	1	·12	...	...	...	...	...	...	143	16·59
28	Mahád	7,192	...	...	...	...	...	...	...	...	...	...	52	7·23
29	Uran	8,135	...	...	...	...	...	...	...	...	1	·12	46	5·65
30	City of Bombay	1,148,815	109	·09	22	·02	56	·05	...	...	449	·39	2,976	2·59
	Ahmednagar District.													
31	Ahmednagar	33,138	4	·12	1	·03	...	...	...	...	37	1·12	43	1·30
32	Sangamner	12,737	...	...	...	...	...	...	...	...	60	4·71	31	2·43
33	Ahmednagar Cantonment	10,997	2	·18	5	·46	2	·18	...	...	1	·09	79	7·18
	Poona District.													
34	Poona City	133,122	98	·74	67	·50	4	·03	...	...	286	2·15	680	5·11
35	Poona Suburban	13,971	...	...	1	·07	...	...	...	...	24	1·72	112	8·02
36	Baramati	11,905	1	·08	1	·08	...	...	...	...	7	·59	88	7·39
37	Khed	7,013	1	·14	...	...	...	...	...	...	13	1·85	22	3·14
38	Lonávla	10,471	1	·09	2	·19	...	...	...	...	56	5·35	22	2·10
39	Junnar	7,376	...	...	...	...	...	...	...	...	8	1·09	50	6·78
40	Poona Cantonment	25,498	1	·04	...	...	...	...	...	...	...	...	110	4·31
41	Kirkee do.	7,991	...	...	...	...	...	...	...	...	5	·63	36	4·51
	Sholapur District.													
42	Sholápur	119,347	4	·03	5	·04	...	...	...	...	3	·03	2,041	17·10
43	Bársi	22,074	1	·05	...	...	...	...	...	...	...	...	559	25·32
44	Pandharpur	25,210	3	·12	10	·40	...	...	...	...	2	·08	519	20·59
	Satara District.													
45	Sátára	22,454	2	·09	2	·09	...	...	...	...	...	...	206	9·17
46	Wái	10,208	15	1·47	1	·10	...	...	...	...	3	·29	35	3·43
47	Karád	11,255	5	·44	...	...	...	...	...	...	...	...	29	2·58
48	Ashta	9,016	...	...	...	...	...	...	...	...	...	...	90	9·98
49	Islámpur	7,915	1	·13	...	...	...	...	...	...	8	1·01	14	1·77
	Ratnagiri District.													
50	Ratnágiri	18,286	1	·06	...	...	...	...	...	...	5	·27	86	4·70
51	Vengurla	19,126	4	·21	2	·10	...	...	...	...	15	·84	95	4·97
52	Málwan	22,213	...	...	2	·09	...	...	...	...	2	·09	103	4·64
53	Chiplun	11,005	...	...	2	·18	...	...	...	...	...	...	81	7·36
	Belgaum District.													
54	Belgaum	36,214	14	·39	9	·24	...	...	...	...	11	·30	185	5·11
55	Gokák	9,989	16	1·60	...	...	...	..	...	...	13	1·30	16	1·60
56	Athni	13,538	...	...	1	·07	...	...	...	...	10	·74	69	5·09
57	Nipáni	11,878	...	...	3	·25	...	...	...	...	10	·84	44	3·71
58	Belgaum Cantonment	6,880	...	...	1	·15	...	...	...	...	1	·15	...	...

No. VI (*a*)—*continued.*

10		11		12		13		14		15		16	17			18	19
Influenza.		Pneumonia.		Phthisis.		Other Respiratory diseases.		Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
...	...	1	·04	8	·34	67	2·83	1	·04	9	·38	12	83	74	157	188·94	14
...	...	...	...	5	·50	25	2·51	...	...	10	1·00	4	10	2	12	74·07	15
...	...	...	...	11	·93	21	1·77	...	...	7	·59	10	16	8	24	153·85	16
...	...	...	...	3	·66	20	4·41	...	...	...	...	2	17	10	27	197·08	17
...	...	36	2·84	11	·87	3	·24	...	...	3	·24	2	13	11	24	380·95	18
...	...	37	1·67	61	2·76	21	·95	1	·05	19	·85	13	42	29	71	157·08	19
...	...	13	1·07	68	5·58	45	3·69	...	...	13	1·07	10	42	26	68	150·44	20
...	...	18	1·02	18	1·02	54	3·07	6	·34	14	·80	15	56	37	93	221·96	21
...	...	11	1·06	24	2·32	17	1·64	12	1·16	1	·09	5	27	22	49	175·00	22
...	...	48	1·67	11	·38	48	1·67	16	·56	22	·76	...	68	35	103	148·05	23
...	...	8	·31	16	·61	12	·46	27	1·04	...	...	5	32	22	54	155·17	24
...	...	1	·21	...	...	1	·21	...	...	...	...	...	3	...	3	300·00	25
...	...	...	...	18	3·43	...	...	1	1·19	2	·38	2	6	6	12	121·21	26
...	...	2	·23	11	1·27	6	·70	...	...	3	·35	1	11	11	22	120·88	27
...	...	...	...	17	2·36	3	·42	1	·14	2	·28	1	21	10	31	175·14	28
...	...	...	...	13	1·59	2	·25	2	·25	2	·25	1	4	8	12	101·69	29
524	·46	9,060	7·88	1,310	1·14	4,486	3·90	1,118	·97	2,569	2·24	81	4,332	3,834	8,166	405·16	30
...	...	21	·63	96	2·90	185	5·58	2	·06	32	·97	7	46	30	76	79·66	31
...	...	...	...	9	·71	16	1·26	...	...	5	·39	5	18	14	32	87·91	32
...	...	10	·91	7	·64	46	4·18	7	·64	2	·18	2	20	8	28	119·66	33
4	·03	1,502	11·28	527	3·96	455	3·42	35	·26	231	1·74	55	802	711	1,513	1064·74	34
...	...	3	·21	8	·57	46	3·29	...	...	21	1·50	...	32	27	59	273·15	35
...	...	4	·34	5	·42	12	1·02	1	·08	26	2·19	8	28	16	44	167·94	36
...	...	...	...	2	·29	24	3·42	1	·14	4	·57	1	8	10	18	90·45	37
7	·67	14	1·34	10	·95	34	3·25	5	·48	3	·28	10	29	23	52	235·29	38
...	...	...	...	15	2·03	15	2·03	...	...	7	·95	2	11	7	18	98·36	39
...	...	13	·51	42	1·65	64	2·51	17	·67	8	·31	8	15	17	32	359·55	40
...	...	63	7·88	2	·25	61	7·63	8	1·00	24	3·00	...	25	24	49	365·67	41
...	...	37	·31	90	·76	295	2·47	3	·03	156	1·30	17	554	458	1,012	232·97	42
...	...	...	...	5	·23	42	1·90	...	...	35	1·59	5	123	83	206	300·73	43
15	·59	39	1·54	34	1·35	58	2·30	4	·16	84	3·33	2	241	201	442	662·67	44
...	...	5	·22	44	1·96	43	1·92	1	·04	22	·98	13	47	36	83	237·82	45
...	...	1	·10	19	1·86	44	4·31	4	·39	15	1·47	5	21	17	38	127·95	46
...	...	1	·09	3	·27	5	·44	...	...	4	·36	2	9	10	19	97·44	47
...	...	...	...	...	...	4	·44	...	...	20	2·22	...	9	9	18	70·04	48
...	...	...	...	10	1·26	40	5·05	...	...	17	2·15	4	9	9	18	86·96	49
3	·17	5	·27	43	2·35	8	·44	22	1·20	6	·33	3	21	6	27	67·16	50
...	...	11	·58	54	2·82	39	2·04	109	5·70	6	·31	4	48	33	81	12·56	51
...	...	4	·18	49	2·21	43	1·93	20	·90	1	·04	1	30	13	43	86·17	52
...	...	...	...	35	3·18	13	1·18	3	·27	3	·27	2	17	11	28	85·63	53
2	·05	13	·36	104	2·87	35	·97	4	·11	38	1·05	5	88	70	158	140·20	54
...	...	...	...	24	2·40	14	1·40	8	·80	26	2·60	...	31	26	57	141·44	55
...	...	...	...	13	·96	30	2·22	...	...	29	2·14	...	18	10	28	74·67	56
...	...	...	...	8	·67	39	3·28	4	·34	13	1·09	...	23	19	42	110·24	57
...	...	8	1·16	...	...	6	·87	...	...	2	·29	4	1	4	5	217·39	58

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*													
	Dharwar District.													
59	Dhárwár	34,327	21	·61	21	·61	...	...	...	...	11	·32	181	5·27
60	Hubli	69,140	16	·23	33	·48	...	...	...	...	67	·97	185	2·67
61	Gadag Bettigeri	41,158	6	·14	33	·80	...	...	...	...	4	·10	198	4·81
62	Ránebennur	13,930	3	·22	8	·57	...	...	...	...	1	·07	18	1·29
63	Nawalgund	7,089	...	...	...	...	...	...	...	...	6	·85	34	4·79
	Bijapur District.													
64	Bijápur	32,471	10	·31	1	·03	...	...	...	...	33	1·02	11	·34
65	Bágalkot	19,471	1	·05	5	·25	...	...	...	...	13	·67	94	4·83
66	Guledgud	14,760	...	...	1	·07	...	...	...	...	16	1·08	69	4·67
67	Ilkal ...	11,856	...	...	3	·25	...	...	...	...	27	2·28	32	2·70
	Kanara District.													
68	Kárwár	14,463	4	·27	...	...	...	...	...	...	17	1·18	24	1·66
69	Kumta	14,291	5	·35	...	...	...	...	...	...	50	3·50	3	·21
70	Gokarn	8,807	...	...	...	...	...	...	...	...	...	...	9	1·02
71	Honáwar	7,035	...	...	...	...	...	...	...	...	4	·57	44	6·25
72	Bhatkal	7,134	...	...	...	...	...	...	...	...	...	...	73	10·23
	Surat District.													
73	Surat	117,428	15	·13	36	·31	...	...	...	...	137	1·17	44	·37
74	Bulsar	19,681	...	...	...	...	...	...	...	...	...	...	93	4·72
75	Ránder	10,547	...	...	1	·09	...	...	...	...	...	...	101	9·58
	Broach District.													
76	Broach	42,626	...	...	3	·07	...	...	...	...	8	·19	83	1·95
77	Jambusar	10,217	...	...	...	...	...	...	...	...	110	10·77	6	·59
78	Ankleshwar	11,756	...	...	...	...	...	...	...	...	...	...	208	17·69
	Kaira District.													
79	Kaira	8,277	...	...	...	...	...	...	...	...	...	...	54	6·52
80	Mehmedabad	6,236	...	...	2	·32	...	...	...	...	...	...	82	13·15
81	Nadiád	31,919	...	...	...	...	...	...	...	...	...	...	406	12·72
82	Borsad	12,113	...	...	...	...	...	...	...	...	...	...	72	5·94
83	Anand	11,024	...	...	...	...	...	...	...	...	...	...	140	12·70
84	Umreth	14,024	...	...	...	...	...	...	...	...	...	...	114	8·13
85	Dákore	7,990	...	...	7	·88	...	...	...	...	1	·12	53	6·63
86	Kapadvanj	14,794	...	...	4	·27	...	...	...	...	49	3·31	7	·47
	Panch Mahals District.													
87	Godhra	26,969	...	...	...	...	...	...	1	·04	...	...	203	7·52
88	Dohad	16,071	...	...	...	...	...	...	...	...	...	...	250	15·56
	Ahmedabad District.													
89	Ahmedabad	2,70,599	...	...	48	·18	...	...	...	...	...	...	1,559	5·76
90	Dhandhuka	8,056	...	...	...	...	...	...	...	...	...	...	121	15·02
91	Viramgaon	26,252	...	...	1	·04	...	...	...	...	...	...	346	13·18
92	Dholka ...	12,513	...	...	6	·48	...	...	...	...	...	...	180	14·38
93	Ahmedabad Cantonment ...	1,745	...	...	...	...	...	...	...	...	...	...	14	8·03
	Karachi District.													
94	Karáchi	199,014	92	·46	100	·50	1	·01	...	...	159	·80	733	3·68
95	Tatta	8,470	...	...	...	...	...	...	...	...	9	1·06	41	4·84
96	Kotri	9,072	...	...	...	...	...	...	...	...	78	8·60	...	...
97	Karáchi Cantonment	6,525	1	·15	...	...	...	...	...	...	1	·15	28	4·29

No. VI (*a*)—*continued.*

10 Influenza.		11 Pneumonia.		12 Phthisis.		13 Other Respiratory diseases.		14 Dysentery.		15 Diarrhœa.		16	17 Deaths under 1 year.			18	19
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths from child birth.	Male.	Female.	Total.	Infant mortality rate per 1,000 births.	No
3	·09	4	·11	50	1·46	152	4·43	11	·32	61	1·78	12	54	52	106	115·59	90
4	·06	11	·16	159	2·30	152	2·20	6	·09	73	1·05	6	153	85	238	117·21	10
9	·22	25	·61	71	1·73	59	1·43	6	·14	18	·44	1	138	106	244	150·34	81
...	...	...	...	26	1·87	41	2·94	4	·29	15	1·07	1	62	41	103	185·25	9
...	...	...	...	9	1·27	5	·71	...	...	9	1·27	...	11	7	18	82·19	93
...	...	11	·34	101	3·11	71	2·19	10	·31	20	·62	...	91	65	156	153·39	9
...	...	...	...	31	1·59	46	2·36	6	·31	29	1·49	2	79	61	140	196·30	9
1	·07	...	...	14	·95	45	3·05	...	...	5	·34	3	58	39	97	143·92	95
...	...	...	...	21	1·77	38	3·20	1	·08	4	·34	1	38	36	74	175·77	97
...	...	...	...	12	·83	3	·21	2	·13	3	·21	5	17	8	25	68·87	88
...	...	...	...	3	·21	23	1·61	4	·28	21	1·47	2	21	23	44	119·89	82
...	...	20	2·41	8	·96	22	2·65	17	2·05	2	·24	5	19	16	35	134·62	70
...	...	...	...	8	1·14	1	·14	1	·11	18	2·56	...	6	12	18	85·33	71
...	...	...	...	7	·98	8	1·12	2	·28	18	2·52	3	12	5	17	66·15	72
5	·04	512	4·36	452	3·85	692	5·89	56	·48	241	2·05	66	661	591	1,252	400·51	75
1	·05	24	1·22	15	·76	28	1·42	2	·10	4	·20	11	37	28	65	138·30	74
...	...	...	...	...	...	45	4·27	6	·57	3	·28	...	19	23	42	199 05	7
...	...	51	1·19	98	2·30	312	7·32	15	·35	32	·75	...	176	148	324	161·31	76
...	...	6	·59	12	1·17	65	6·36	4	·39	4	·39	...	39	32	71	168 65	77
...	...	2	·17	8	·68	40	3·40	...	...	1	·09	...	51	33	84	159 62	7
...	...	1	·12	11	1·33	41	4·95	1	·12	7	85	...	21	21	42	190·05	79
...	...	3	·48	11	1·76	26	4·17	1	·16	3	·48	...	31	23	54	217·74	8
...	...	161	5·05	51	1·60	63	1·97	5	·16	3	·09	..	144	130	274	265·76	87
...	...	16	1·32	...	...	54	4·46	46	3 79	...	...	...	64	63	127	218·80	8
...	...	...	...	...	...	...	...	6	·54	1	·09	...	17	22	39	117·87	8
...	...	...	...	9	·64	142	10·13	6	·43	...	...	...	61	63	124	270·67	84
...	..	41	5·13	22	2·75	23	2·88	7	·88	13	1·63	...	26	40	66	259·13	85
...	...	62	4·19	41	2·77	112	7·57	...	...	6	·41	2	59	38	86	160·67	8
...	...	...	...	6	·22	7	·26	4	·15	...	...	...	26	27	53	133·17	87
...	...	...	...	...	...	2	·13	1	·06	3	·19	2	43	33	76	145·59	88
4	·02	276	1·02	951	3·51	3,204	11·84	79	·29	228	·84	122	1,501	1,414	2,915	299·04	89
...	...	2	·25	10	1·24	40	4·96	2	·25	1	·12	...	33	24	57	183·25	90
1	·04	11	·42	51	1·94	183	6·97	1	·04	6	·23	5	100	94	194	306 43	91
...	...	3	·24	17	1·36	42	3·36	...	...	8	·64	...	54	50	104	195·49	92
...	...	1	·57	...	...	...	...	...	...	...	...	...	2	...	2	166·67	93
80	·40	417	2·09	332	1·67	545	2·74	33	·17	101	·51	108	938	819	1 757	252·01	94
...	...	19	2·24	18	2·13	13	1·53	1	·12	3	·35	8	26	15	41	264·51	95
...	...	10	1·10	10	1·10	...	...	...	...	3	·33	7	12	13	25	231·48	96
...	...	4	·61	...	...	...	...	...	...	...	...	...	8	3	11	49·55	97

1	2	3	4		5		6		7		8		9	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.		Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*concluded.*													
	Hyderabad District.													
98	Hyderabad	72,625	21	·29	4	·06	...	...	...	...	387	5·33	33	·45
99	Halla	5,757	...	...	...	...	...	...	...	...	26	4·52	34	5·90
100	Matiari	4,638	...	...	...	...	...	...	...	...	10	2·15	1	·22
101	Hyderabad Cantonment	3,760	...	...	...	...	...	...	...	...	...	...	11	2·93
	Thar and Parkar District.													
102	Umarkot	4,199	...	...	...	...	...	...	...	...	18	4·29	1	·24
103	Mirpurkhas	5,765	...	...	1	·17	...	...	...	...	61	10·58	...	...
	Nawabshah District.													
104	Nawábsháh	2,771	2	·72	...	...	...	...	...	...	10	3·61	2	72
105	Tando Adam	12,966	...	...	...	...	...	...	...	...	86	6·63	...	...
	Larkana District.													
106	Lárkána	17,700	...	...	1	·05	...	...	...	...	218	12·32	...	...
107	Kambar	7,613	2	·26	...	...	...	...	...	...	76	9·99	...	...
108	Ratodero	5,565	...	...	...	...	...	...	...	...	...	...	108	19·40
109	Sehwan	4,423	...	...	...	...	...	...	...	...	26	5·88	2	·45
	Sukkur District.													
110	Sukkur	42,046	...	...	1	·02	...	...	...	...	...	...	480	11·12
111	Shikárpur	55,347	6	·11	89	1·61	...	...	...	...	27	·49	509	9·19
112	Rohri	11,378	...	...	...	...	...	...	...	...	151	13·27	...	...
113	Garhi Yasin	6,375	...	...	...	...	...	...	...	...	123	19·29	...	...
	Upper Sind Frontier District.													
114	Jacobabad	10,578	...	...	...	...	...	...	...	...	...	...	130	12·29
	Total of Towns ...	37,32,897	489	·13	588	·15	65	·02	1	1·00	3,091	·83	19,200	5·14
	Total for the Presidency ...	1,91,65,614	1,953	·10	2,134	·11	69	·01	1	1·00	33,674	1·76	1,58,835	8·29

No. VI (*a*)—*concluded.*

10 Influenza.		11 Pneumonia.		12 Phthisis.		13 Other Respiratory diseases.		14 Dysentery.		15 Diarrhœa.		16	17 Deaths under 1 year.			18	19
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths. from child birth.	Male.	Female.	Total.	Infant. mortality rate per 1,000 births.	No.
...	...	254	3·50	205	2·82	234	3·22	38	·52	42	·58	37	301	238	539	175·46	98
...	...	...	...	...	...	2	·35	...	...	...	...	1	9	10	19	138·69	99
...	...	1	·22	8	1·73	4	·86	...	...	1	·22	3	11	6	17	131·78	100
...	...	...	...	...	...	...	...	...	...	...	...	2	2	3	5	142·86	101
...	...	12	2·86	5	1·19	3	·71	2	·47	1	·24	...	5	2	7	107·69	102
...	...	26	4·51	5	·87	13	2·25	1	·17	3	·52	5	16	16	32	533·33	103
...	...	2	·72	...	...	...	...	...	...	...	...	1	2	3	5	108·70	104
...	...	6	·47	5	·38	5	·38	...	...	...	...	3	11	14	25	110·13	105
...	...	10	·57	8	·45	3	·17	9	·51	4	·22	40	85	75	160	304·76	106
...	...	...	...	...	...	...	...	...	...	...	...	3	10	11	21	189·19	107
...	...	...	...	2	·36	1	·18	2	·36	...	...	5	23	16	39	192·12	108
...	...	8	1·81	7	1·58	12	2·71	...	...	...	...	1	12	11	23	323·94	109
...	...	16	·38	7	·17	1	·02	2	·05	8	·19	18	103	80	183	162·35	110
...	...	8	·14	8	·14	30	·55	7	·13	8	·14	52	274	201	475	320·95	111
...	...	7	·61	5	·44	6	·53	2	·18	3	·26	10	43	·29	72	209·91	112
...	...	...	...	...	...	..	...	...	...	1	·16	...	30	29	59	325·97	113
...	...	...	...	4	·38	...	...	2	·19	...	...	14	34	20	54	267·33	114
768	·21	13,140	3·53	5,991	1·60	14,204	3·80	1,877	·50	4,729	1·27	1,048	13,709	11,728	25,437	268·64	
1,222	·06	15,995	·83	15,823	·83	50,864	2·65	4,410	·23	16,708	·87	4,203	57,130	47,841	1,04,971	169·10	

ANNUAL FORM No. VII.—DEATHS *registered from* CHOLERA *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from cholera were reported.	Number in each District.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	1	1,478	1	...	...	...	...	...	.....
2	West Khándesh ...	10	...	1,242	...	...	...	...	...	...	.. ...
3	Násik	19	...	1,667	...	...	...	...	...	...	.....
4	Thána	15	2	1,546	2	...	1	...	...	...	1
5	Bombay Suburban ...	5	...	86	...	...	...	...	...	...	.....
6	Kolába	14	2	1,482	7	...	...	...	...	...	.....
7	City of Bombay ...	1	1	1	1	...	1	...	1	1	3
	Central Registration District.										
8	Ahmednagar	15	...	1,346	...	...	...	...	...	...	.....
9	Poona	20	3	1,157	4	4	...	...	..	...	.....
10	Sholápur	10	3	718	4	...	...	...	...	2	2
11	Sátára	19	1	1,342	1	...	...	...	...	1	.....
12	Ratnágiri	15	2	1,305	2	1	...	...	...	...	.....
	Southern Registration District.										
13	Belgaum	15	9	1,069	62	...	...	2	...	...	7
14	Dhárwár	18	14	1,277	115	...	...	...	...	1	49
15	Bijápur...	13	12	1,128	152	...	...	...	...	63	378
16	Kánara...	16	3	1,264	5	...	...	...	...	...	.....
	Gujarat Registration District.										
17	Surat	12	1	782	1	...	...	1	...	...	.....
18	Broach...	9	1	404	1	...	...	...	...	...	.....
19	Kaira	15	...	579	...	...	...	...	...	...	.....
20	Panch Mahâls ...	7	...	668	...	...	...	...	...	...	.....
21	Ahmedabad	13	...	871	...	...	...	...	...	...	... ..
	Sind Registration District.										
22	Karáchi	16	1	793	4	25	...	...	...	...	.....
23	Hyderabad	11	...	862	...	...	...	...	...	...	.....
24	Thar and Párkar ...	13	...	904	...	...	...	...	...	...	.....
25	Nawábsháh	9	...	731	...	...	...	...	...	...	.....
26	Lárkána	15	...	763	...	...	...	...	...	...	.....
27	Sukkur...	12	...	671	...	...	...	...	...	...	.....
28	Upper Sind Frontier.	6	...	410	...	...	...	...	...	...	.....
	Total for the Presidency.	365	56	26,546	362	30	2	3	1	68	440

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1922.*

July.	August.	September.	October.	November.	December.	6 Total. Male.	6 Total. Female.	6 Total. Total.	7 Ratio of Deaths per 1,000 of Population. Male.	7 Ratio of Deaths per 1,000 of Population. Female.	7 Ratio of Deaths per 1,000 of Population. Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
2	...	...	...	...	...	2	...	2	·00	...	·00	·62	1
...	...	...	...	...	...	...	...	...	...	...	...	1·09	2
...	...	...	...	...	...	...	...	...	...	...	...	1·01	3
...	...	...	...	...	...	1	1	2	·00	·00	·00	1·54	4
...	...	...	...	...	...	...	...	...	...	...	...	Not available	5
1	8	12	6	...	...	18	9	27	·06	·03	·05	3·01	6
3	1	1	2	...	1	9	5	14	·01	·02	·01	2·18	7
...	...	...	...	...	...	...	...	...	...	...	...	·93	8
3	2	...	...	...	...	6	3	9	·01	·01	·01	·97	9
4	7	2	...	...	...	14	3	17	·04	·01	·02	1·10	10
...	...	...	1	...	...	2	...	2	·00	...	·00	·84	11
...	...	1	...	...	...	1	1	2	·00	·00	·00	·53	12
102	44	79	71	67	12	203	181	384	·42	·39	·41	1·28	13
132	357	239	180	42	3	532	471	1,003	1·01	·93	·97	1·03	14
404	53	94	54	158	38	644	598	1,242	1·59	1·53	1·56	1·34	15
...	...	...	12	24	...	16	20	36	·08	·10	·09	·85	16
...	...	...	...	...	...	...	1	1	...	·00	·00	·81	17
2	...	...	...	...	...	...	2	2	...	·01	·00	·68	18
...	...	...	...	...	...	...	...	...	...	...	...	·20	19
...	...	...	...	...	...	...	...	...	...	...	...	·37	20
...	...	...	...	...	...	...	...	...	...	...	...	·03	21
...	...	...	...	...	...	14	11	25	·05	·05	·05	·16	22
...	...	...	...	...	...	...	...	...	...	...	...	·01	23
...	...	...	...	...	...	...	...	...	...	...	...	·01	24
...	...	...	...	...	...	...	...	...	...	...	...	·01	25
..	...	...	...	...	...	...	...	...	...	...	...	·06	26
...	...	...	...	...	...	...	...	...	...	...	...	·16	27
...	...	...	...	...	...	...	...	...	...	...	...	·05	28
653	472	428	326	291	54	1,462	1,306	2,768	·15	·14	·14	·85	

ANNUAL FORM No. VIII.—DEATHS *registered from* SMALL-POX *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	12	1,478	44	4	11	21	22	22	8
2	West Khándesh ...	10	4	1,242	4	...	...	...	...	...	1
3	Násik	19	11	1,667	16	1	2	3	1	3	4
4	Thána	15	8	1,546	14	5	8	12	6	6	1
5	Bombay Suburban ...	5	1	86	2	...	...	3	4	...	...
6	Kolába	14	5	1,482	21	4	6	3	4	6	2
	City of Bombay ...	1	1	1	1	4	3	9	10	10	3
	Central Registration District.										
8	Ahmednagar	15	4	1,346	10	..	3	2	...	2	...
9	Poona	20	12	1,157	20	7	15	23	39	30	18
10	Sholápur	10	...	718	...	...	...	...	...	...	...
11	Sátára	19	5	1,342	7	...	3	3	2	2	...
12	Ratnágiri	15	6	1,305	17	8	1	9	3	2	4
	Southern Registration District.										
13	Belgaum	15	9	1,069	25	5	7	7	8	3	6
14	Dhárwár	18	6	1,277	22	6	10	2	3	3	2
15	Bijápur	13	5	1,128	13	7	1	2	3	1	...
16	Kánara	16	9	1,264	17	6	2	1	4	15	8
	Gujarát Registration District.										
17	Surat	12	5	782	9	4	9	31	51	50	16
18	Broach	9		404	2	...	...	...	1	1	...
19	Kaira	15	4	579	6	9	...	11	...	1	...
20	Panch Mahals	7	2	668	13	...	8	16	5	3	6
21	Ahmedabad	13	6	871	13	3	1	2	1	1	...
	Sind Registration District.										
22	Karáchi	16	3	793	4	11	13	69	79	20	5
23	Hyderabad	11	1	862	1	...	1	...	...	2	3
24	Thar and Párkar ...	13	3	904	3	...	...	1	2	1	...
25	Nawábsháh	9	2	781	2	...	...	1	...	...	..
26	Lárkána	15	1	763	1	...	...	1	...	...	...
27	Sukkur	12	2	671	2	1	...	...	...	...	...
28	Upper Sind Frontier ...	6	1	410	1	...	...	...	1	1	..
	Total for the Presidency.	365	130	26,546	290	85	104	232	249	185	87

N.B.—Small-pox should not include Measles.

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1922.*

July.	August.	September.	October.	November.	December.	6 Total Deaths — Male.	6 Total Deaths — Female.	6 Total Deaths — Total.	7 Number of the Deaths among Children — Under 1 year.	7 Number of the Deaths among Children — Under 12 years	8 Total Ratio of Deaths per 1,000 of Population — Male.	8 Total Ratio of Deaths per 1,000 of Population — Female.	8 Total Ratio of Deaths per 1,000 of Population — Total.	9 Mean ratio per 1,000 of previous five years.	10 No.
6	7	4	...	1	...	61	55	106	25	72	·09	·10	·10	·45	1
...	...	1	...	1	3	4	2	6	1	5	·01	·01	·01	·99	2
2	6	4	1	...	4	13	18	31	20	7	·03	·04	·04	·16	3
1	3	2	...	1	3	25	23	48	15	28	·06	·06	·06	·20	4
...	...	...	...	...	...	5	2	7	2	4	·06	·03	·04	not available	5
2	5	...	...	2	5	22	17	39	13	25	·07	·08	·07	·28	6
3	...	1	6	3	9	38	22	60	8	24	·05	·03	·05	·55	7
3	...	...	2	3	3	13	10	23	6	14	·04	·03	·04	·17	8
21	3	2	7	15	7	106	81	187	40	117	·21	·17	·19	·22	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	·30	10
...	...	...	2	6	...	11	6	17	3	5	·02	·01	·02	·07	11
8	...	1	2	1	...	19	20	39	10	13	·04	·03	·03	·16	12
2	...	...	2	2	...	18	24	42	11	16	·04	·05	·04	·12	13
1	2	2	2	4	2	21	18	39	12	17	·04	·04	·04	·14	14
...	...	...	...	...	1	8	7	15	5	6	·02	·02	·03	·11	15
5	...	1	...	...	...	26	16	42	8	4	·13	·08	·10	·53	16
4	...	...	...	...	...	67	98	165	76	79	·20	·29	·24	·20	17
...	...	...	...	...	...	1	1	2	...	1	·01	·01	·00	·12	18
...	...	...	...	...	...	10	11	21	6	11	·03	·03	·03	·10	19
...	...	...	...	...	...	16	22	38	9	25	·08	·12	·10	·08	20
4	1	...	1	1	...	7	8	15	6	6	·01	·02	·02	·15	21
1	...	1	...	...	3	112	89	201	26	56	·37	·39	·38	·39	22
...	...	...	...	...	...	3	3	6	2	3	·01	·01	·01	·20	23
...	...	...	...	...	...	2	2	4	2	...	·01	·01	·01	·14	24
...	...	...	...	3	1	4	1	5	4	...	·02	·01	·01	·14	25
...	...	...	...	...	...	1	...	1	..	...	·00	...	·00	·22	26
...	...	...	1	4	3	5	4	9	...	...	·02	·02	·02	·09	27
...	...	...	...	...	...	2	...	2	...	...	·01	...	·01	·10	28
63	27	19	26	46	47	610	560	1,170	315	538	·06	·06	·06	·23	

which is called "chota chechuk" in some parts of the country.

ANNUAL FORM No. IX.—DEATHS *registered from* FEVERS *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from fevers were reported.	Number in each District.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	22	1,478	1,313	1,694	1,743	1,756	1,793	1,507	878
2	West Khándesh ...	10	10	1,242	1,126	609	884	923	811	645	428
3	Násik	19	19	1,637	1,492	1,303	1,222	1,137	987	773	514
4	Thána	15	15	1,546	1,458	1,420	1,218	1,215	1,111	881	635
5	Bombay Suburban.	5	5	86	79	167	168	116	109	107	8
6	Kolába	14	14	1,482	1,372	1,073	1,130	1,025	893	581	5[illegible]9
7	City of Bombay	1	1	1	1	370	400	495	428	317	203
	Central Registration District.										
8	Ahmednágar ...	15	15	1,346	1,176	1,193	756	784	951	625	41
9	Poona	20	20	1,157	1,059	936	822	929	883	840	695
10	Sholápur	10	10	718	624	922	871	888	786	844	542
11	Sátára	19	19	1,342	1,226	918	783	906	1,093	907	812
12	Ratnágiri	15	15	1,305	1,215	1,290	1,093	1,018	883	772	609
	Southern Registration District.										
13	Belgaum	15	15	1,069	937	347	362	494	551	607	511
14	Dhárwár	18	18	1,277	1,074	423	482	689	576	574	430
15	Bijápur	13	13	1,128	1,020	386	361	424	525	675	653
16	Kánara	16	16	1,264	951	403	408	481	379	286	320
	Gujarát Registration District.										
17	Surat	12	12	782	641	316	353	346	302	324	285
18	Broach	9	9	404	379	246	205	216	212	201	205
19	Kaira	15	15	579	548	436	342	427	350	392	352
20	Panch Mahális ...	7	7	668	570	222	201	222	228	179	168
21	Ahmedabad ...	13	13	871	871	1,182	1,088	1,206	929	768	600
	Sind Registration District.										
22	Karáchi	16	16	793	618	523	470	386	305	237	192
23	Hyderabad ...	11	11	862	862	539	488	422	397	347	283
24	Thar and Párkar...	13	13	904	904	433	368	328	247	260	198
25	Nawabshah ...	9	9	731	731	372	316	283	267	250	213
26	Lárkána	15	15	763	763	870	510	473	459	437	365
27	Sukkur	12	12	671	671	511	373	395	436	458	375
28	Upper Sind Frontier	6	6	410	410	256	170	170	176	158	138
	Total for the Presidency ...	365	365	26,546	24,091	19,563	17,541	18,234	16,898	14,921	11,776

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1922.*

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.				
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
840	1,147	1,13[illegible]	1,[illegible]	963	856	7,[illegible]	7,525	15,405	14·45	14·20	14·33	2[illegible]·06	1
1415	613	651	655	871	875	4,247	4,223	8,470	13·72	13·93	13·82	27·95	2
718	1,006	987	1,09[illegible]	1,019	1,217	6,322	5,748	12,070	15·11	14·13	14·63	31·45	3
637	811	911	1,021	1,345	1,449	[illegible]	5,9[illegible]	12,054	17·23	16·13	16·72	[illegible]·45	4
84	98	104	12[illegible]	141	171	807	660	1,4[illegible]7	9·22	1[illegible]·33	9·69	[illegible]t available.	5
566	549	654	643	782	951	4,76[illegible]	4,586	9,355	17·07	16·23	16·63	2[illegible]·24	6
247	295	288	[illegible]	360	293	2,504	1,632	4,136	3·33	4·12	3·60	[illegible]·[illegible]2	7
453	510	5[illegible]1	644	635	57[illegible]	4,215	3,49[illegible]	7,714	11·61	9·69	1[illegible]·[illegible]6	21·90	8
801	999	948	9[illegible]9	854	1,145	[illegible],967	4,924	10,891	11·92	10·11	11·03	24·17	9
719	870	90[illegible]	862	797	966	5,078	4,894	9,972	13·28	13·62	13·45	32·58	10
996	1,142	1,253	933	985	997	6,127	5,631	11,758	11·98	10·94	11·46	2[illegible]·36	11
751	654	738	695	771	892	4,915	5,251	10,166	9·83	8·33	8·81	17·[illegible]0	12
542	565	532	653	651	684	3,476	3,056	6,532	7·17	6·57	[illegible]·86	16·15	13
529	648	682	791	733	998	3,778	3,837	7,615	7·15	7·56	7·35	17·97	14
569	677	787	858	917	1,008	4,034	3,806	7,840	9·93	9·73	9·85	27·35	15
392	342	3[illegible]4	393	367	463	2,328	2,289	4,617	11·41	11·58	11·50	19·22	16
327	434	410	487	625	803	2,453	2,539	4,992	7·27	7·54	7·41	16·90	17
213	297	349	412	455	449	1,772	1,718	3,490	11·17	11·52	11·34	2[illegible]·34	18
335	456	451	571	448	387	2,563	2,423	4,986	6·75	7·32	7·01	17·18	19
196	211	279	332	572	356	1,646	1,519	3,165	8·51	8·37	8·44	19·70	20
569	848	919	1,149	1,013	951	5,921	5,304	11,225	12·50	12·89	12·64	22·80	21
129	139	183	2[illegible]1	299	344	1,997	1,531	3,528	6·60	6·71	6·65	19·35	22
234	305	278	440	492	443	2,716	1,962	4,678	8·57	7·84	8·25	27·01	23
212	145	204	201	371	375	1,887	1,510	3,397	8·54	8·62	8·57	32·11	24
177	175	200	293	433	341	1,847	1,477	3,324	7·90	7·99	7·94	32·08	25
332	380	415	482	1,040	676	3,612	2,829	6,432	10·90	10·57	10·76	29·96	26
416	374	417	564	767	667	3,023	2,729	5,752	10·74	11·98	11·29	32·84	27
158	130	124	253	301	223	1,251	1,006	2,257	9·51	9·43	9·38	25·12	28
12,007	14,769	15,730	17,113	19,055	19,581	103,824	94,064	197,888	10·33	10·32	10·33	21·04	

ANNUAL FORM No. X.—DEATHS *registered from* DYSENTERY *and* DIARRHŒA

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	21	1,478	241	49	49	50	55	56	51
2	West Khándesh ...	10	10	1,242	93	14	15	7	17	18	11
3	Násik	19	18	1,667	285	43	38	60	61	44	43
4	Thána	15	14	1,546	111	31	23	15	10	21	13
5	Bombay Suburban ...	5	4	86	39	9	9	10	8	4	10
6	Kolába...	14	14	1,482	171	26	21	23	21	15	16
7	City of Bombay ...	1	1	1	1	391	347	307	253	240	267
	Central Registration District.										
8	Ahmednagar	15	15	1,346	510	165	76	93	72	63	91
9	Poona	20	20	1,157	440	88	76	105	78	114	153
10	Sholápur	10	10	718	348	90	76	70	70	70	66
11	Sátára	19	19	1,342	453	60	56	66	62	98	132
12	Ratnágiri	15	15	1,305	319	121	73	65	48	59	46
	Southern Registration District.										
13	Belgaum	15	15	1,069	497	87	71	106	127	178	229
14	Dhárwár	18	18	1,277	288	43	39	53	44	67	104
15	Bijápur	13	13	1,128	447	61	43	35	50	67	105
16	Kánara	16	16	1,264	270	62	60	52	46	46	76
	Gujarát Registration District.										
17	Surat	12	12	783	156	33	27	24	23	67	51
18	Broach...	9	9	404	93	8	6	2	4	4	16
19	Kaira	15	15	579	145	14	19	11	31	23	26
20	Panch Mahális ...	7	7	668	64	1	2	4	5	5	9
21	Ahmedabad ...	13	12	671	170	59	52	48	39	34	33
	Sind Registration District.										
22	Karáchi	16	11	793	15	17	13	11	8	12	4
23	Hyderabad	11	10	862	10	7	6	12	7	11	7
24	Thar and Párkar ...	13	8	904	10	2	1	1	1	3	...
25	Nawabshah	9	9	731	25	1	1	...	...	...	...
26	Lárkána	15	9	763	3	3	2	1	...	2	...
27	Sukkur...	12	11	671	11	10	2	4	3	...	2
28	Upper Sind Frontier .	6	4	410	4	7	7	1	...	...	...
	Total for the Presidency	365	340	26,546	5,216	1,492	1,204	1,293	1,132	1,318	1,574

in the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1922.*

1						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.				
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
87	144	86	43	38	47	335	370	755	·71	·70	·70	1·49	1
24	32	24	16	15	13	112	94	206	·36	·31	·34	·62	2
63	103	82	81	72	70	412	348	760	·98	·86	·92	1·49	3
32	24	25	22	14	17	142	94	236	·37	·26	·31	·90	4
12	23	13	7	11	17	83	50	133	·95	·78	·88		5
24	53	37	24	19	23	169	136	305	·60	·48	·55	1·53	6
349	376	343	291	243	347	2,036	1,651	3,687	2·71	4·16	3·21	3·57	7
130	149	177	154	116	128	757	656	1,413	2·08	1·82	1·96	3·15	8
182	220	234	157	133	121	936	725	1,661	1·87	1·49	1·68	2·68	9
141	215	204	138	118	118	768	666	1,434	2·01	1·85	1·93	2·89	10
189	249	250	212	138	118	792	838	1,630	1·55	1·63	1·59	2·55	11
82	81	85	101	103	84	492	450	942	·94	·72	·82	1·17	12
283	304	283	252	230	193	1,191	1,155	2,346	2·46	2·49	2·48	3·39	13
94	110	119	107	79	78	495	442	937	·94	·87	·90	1·52	14
143	193	199	184	202	143	793	649	1,398	1·75	1·76	1·75	2·83	15
96	105	80	68	50	71	449	365	814	2·20	1·85	2·03	2·71	16
70	112	79	45	41	43	530	278	808	·93	·83	·90	1·05	17
9	49	33	28	27	25	110	101	211	·69	·68	·69	1·00	18
52	70	80	60	51	31	262	199	461	·63	·60	·65	1·32	19
10	12	24	13	9	13	53	53	106	·27	·29	·28	·73	20
47	113	87	54	59	62	389	296	685	·82	·71	·77	1·35	21
8	12	23	19	13	10	96	60	156	·32	·20	·29	·36	22
13	10	20	7	14	7	70	52	122	·32	·21	·20	·29	23
...	1	5	1	2	3	11	9	20	·05	·05	·05	·08	24
1	...	1	1	1	...	4	2	6	·02	·01	·02	·05	25
4	2	...	3	5	2	20	9	29	·06	·03	·05	·04	26
1	5	3	6	3	7	23	22	45	·08	·09	·09	·16	27
...	...	...	1	1	1	7	5	12	·05	·05	·05	·09	28
2,104	2,720	2,604	2,099	1,843	1,797	11,303	9,815	21,118	1·12	1·08	1·10	1·68	

ANNUAL FORM No. XI.—DEATHS *registered from* RESPIRATORY DISEASES *in*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	22	1,478	833	460	434	442	389	303	223
2	West Khándesh ...	10	10	1,242	602	257	237	210	169	99	90
3	Násik ...	19	19	1,667	958	500	473	383	342	302	207
4	Thána ...	15	15	1,516	342	127	122	110	107	91	81
5	Bombay Suburban ...	5	5	86	34	26	33	17	18	14	19
6	Kolába ...	14	14	1,482	466	119	93	96	80	76	66
7	City of Bombay ...	1	1	1	1	1,473	1,401	1,379	1,451	1,275	1,093
	Central Registration District.										
8	Ahmednagar ...	15	15	1,346	990	511	358	355	332	285	259
9	Poona ...	20	20	1,157	744	587	488	481	490	444	378
10	Sholápur ...	10	10	718	381	175	164	173	157	142	140
11	Sátára ...	19	19	1,342	532	144	119	123	129	126	136
12	Ratnágiri ...	15	15	1,305	978	491	450	426	450	347	324
	Southern Registration District.										
13	Belgaum ...	15	15	1,069	642	194	203	239	253	276	201
14	Dhárwár ...	18	18	1,277	639	219	220	274	214	209	212
15	Bijápur ...	13	13	1,128	589	153	132	191	133	180	117
16	Kánara ...	16	16	1,264	277	51	53	46	43	55	19
	Gujarát Registration District.										
17	Surat ...	12	12	782	677	633	544	564	497	420	403
18	Broach ...	9	9	404	349	178	170	164	129	188	142
19	Kaira ...	15	14	579	511	423	391	446	457	438	412
20	Panch Mahals ...	7	7	668	312	89	54	70	55	60	44
21	Ahmedabad ...	13	13	871	604	819	706	727	631	629	404
	Sind Registration District.										
22	Karáchi ...	16	15	793	45	131	172	159	161	171	103
23	Hyderabad ...	11	11	862	25	160	127	137	79	57	44
24	Thar and Párkar ...	13	13	904	107	37	37	59	23	21	11
25	Nawábshah ...	9	3	731	3	8	15	10	4	11	1
26	Lárkána ...	15	12	763	18	22	22	12	10	7	5
27	Sukkur ...	12	11	671	11	16	18	15	11	10	6
28	Upper Sind Frontier.	6	5	410	5	9	2	...	7	2	1
	Total for the Presidency ...	365	352	26,546	11,725	8,023	7,241	7,240	6,797	6,242	5,282

the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1922.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	Female.	Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	Female.	Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
250	305	318	343	313	346	2,212	1,894	4,105	4·06	3·58	3·82	4·75	1
109	126	149	163	179	230	1,012	917	2,009	3·53	3·02	3·28	3·45	2
265	326	358	404	377	435	2,216	2,136	4,352	5·29	5·25	5·27	5·19	3
73	85	106	99	99	121	749	472	1,221	1·93	1·28	1·61	1·75	4
21	23	23	10	13	33	159	91	250	1·82	1·42	1·65		5
83	100	100	93	100	114	674	446	1,120	2·41	1·58	1·99	2·48	6
1,181	1,492	976	1,207	1,155	1,263	8,750	6,106	14,856	11·04	15·39	12 92	21·15	7
297	344	352	396	363	414	2,217	2,040	4,257	6·11	5·65	5·84	5·86	8
482	595	601	552	438	599	3,065	3,126	6,191	6·12	6·42	6·27	7·02	9
143	191	190	198	177	246	1,020	1,076	2,096	2·67	3·00	2·83	2·87	10
142	190	223	209	185	231	964	998	1,962	1·88	1·94	1·91	2·02	11
317	373	409	403	386	416	2,714	2,131	4,845	5·17	3·39	4·20	4·53	12
242	273	294	216	260	335	1,584	1,440	3,024	3 27	3·10	3·19	3·51	13
258	284	311	289	247	208	1,481	1,582	3,063	2 80	3 12	2·96	4·03	14
219	220	243	209	207	253	1,279	1,008	2,287	3·16	2·58	2·87	3 47	15
54	59	64	64	71	62	397	276	673	1·95	1·40	1·68	1·05	16
542	566	598	598	673	805	3,766	3,165	6,931	11·17	9·40	10·28	11 03	17
141	180	223	257	267	333	1,309	1,072	2,381	8·26	7·19	7·74	10·09	18
439	485	519	582	477	524	3,250	2,348	5,598	8·56	7·09	7·87	10·02	19
55	43	55	67	77	90	475	284	759	2·46	1·57	2·03	2 97	20
523	580	637	644	627	677	4,343	3,316	7,664	9·18	8·01	8 63	10·12	21
94	100	87	80	101	113	863	609	1,472	2·85	2·07	2·77	2·78	22
41	58	51	38	65	74	573	358	931	1·81	1·43	1·65	2·16	23
12	5	9	14	27	24	170	109	279	·77	·62	·70	1 00	24
8	9	4	3	4	8	64	21	85	·27	·11	·20	·51	25
7	7	6	5	6	9	77	41	118	·23	·15	·20	·29	26
6	3	5	9	4	15	93	25	118	·33	·11	·23	·42	27
1	1	2	1	...	8	19	15	34	·14	·14	·14	·20	28
6,105	6,631	6,918	7,183	6,948	8,072	45,590	37,102	82,692	4·54	4.07	4·31	5·12	

ANNUAL FORM No. XII.—DEATHS *registered from* PLAGUE *in*

1	2	3		4							
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	22	8	1,478	20	98	129	185	7	...	...
2	West Khándesh ...	10	...	1,242	...	...	...	...	...	...	...
3	Násik ...	19	3	1,667	7	10	2	...	...	...	...
4	Thána ...	15	10	1,546	29	23	100	59	25	5	...
5	Bombay Suburban ...	5	3	86	9	7	14	16	27	12	3
6	Kolába ...	14	3	1,482	7	2	...	3	1	...	...
7	City of Bombay ...	1	1	1	1	35	73	125	103	74	22
	Central Registration District.										
8	Ahmednagar ...	15	4	1,346	7	...	6	7	...	...	...
9	Poona ...	20	13	1,157	64	...	...	...	...	...	12
10	Sholápur ...	10	7	718	14	...	...	...	...	...	...
11	Sátára ...	19	6	1,342	33	23	11	8	2	1	...
12	Ratnágiri ...	15	3	1,305	4	...	...	3	1	...	...
	Southern Registration District.										
13	Belgaum ...	15	10	1,069	45	14	23	13	6	4	9
14	Dhárwár ...	18	17	1,277	110	160	100	43	21	4	13
15	Bijápur ...	13	3	1,128	2	...	...	...	...	...	...
16	Kánara ...	16	4	1,264	8	4	2	1	...	...	...
	Gujarát Registration District.										
17	Surat ...	12	4	782	6	...	...	...	...	...	...
18	Broach ...	9	1	404	1	...	1	...	...	...	...
19	Kaira ...	15	...	579	...	...	...	...	...	...	...
20	Panch Mahálś ...	7	...	668	...	...	...	...	...	...	...
21	Ahmedabad ...	13	2	871	2	...	...	...	1	...	...
	Sind Registration District.										
22	Karáchi ...	16	4	793	4	9	50	95	314	172	25
23	Hyderabad ...	11	1	862	1	...	...	1	3	...	...
24	Thar and Párkar ...	13	...	904	...	...	...	...	...	...	...
25	Nawábshah ...	9	2	731	5	...	...	1	6	2	...
26	Lárkána ...	15	...	763	...	...	...	...	...	...	...
27	Sukkur ...	12	1	671	1	...	...	...	...	1	...
28	Upper Sind Frontier ...	6	...	410	...	...	...	...	...	...	...
	Total for the Presidency ...	365	110	26,546	389	395	511	560	577	275	84

the DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1922.*

5						6			7			8	
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.				
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	N.
...	8	40	54	133	176	400	430	830	·73	·81	·77	5·04	1
...	...	...	...	...	...	.....	...	...	...	...	...	6·27	2
...	...	...	13	10	...	17	18	35	·04	·04	·04	3·39	3
...	40	51	10	14	29	193	163	356	·50	·44	·47	·59	4
2	...	1	...	...	5	44	43	87	·50	·67	·57		5
...	...	2	...	...	2	4	6	10	·01	·02	·02	·12	6
23	37	19	25	22	11	462	167	629	·61	·43	·55	·93	7
...	...	...	...	2	2	6	11	17	·02	·03	·03	1·58	8
32	118	191	235	321	359	624	644	1,268	1·25	1·32	1·29	2·71	9
...	8	64	45	144	124	190	198	388	·50	·55	·52	4·29	10
...	5	33	18	88	142	161	170	331	·31	·33	·33	8·67	11
...	...	...	1	...	29	11	23	34	·03	·04	·03	·21	12
37	147	336	351	234	256	722	708	1,430	1·49	1·52	1·51	3·92	13
46	85	267	516	378	505	1,028	1,110	2,138	1·95	2·17	2·06	4·39	14
...	...	1	...	...	9	4	6	10	·01	·02	·01	2·74	15
...	1	9	23	7	25	42	30	72	·21	·15	·18	·28	16
...	1	4	24	22	3	24	30	54	·07	·09	·08	1·92	17
...	...	...	...	...	...	.....	1	1	...	·01	...	2·11	18
...	...	...	...	...	...	.....	...	...	...	...	...	5·28	19
...	...	...	...	...	...	.....	...	...	...	...	...	1·53	20
...	...	1	...	...	...	2	...	2	·00	...	·00	5·71	21
2	...	2	...	2	2	433	240	673	1·43	1·05	1·27	1·44	22
...	...	...	...	...	...	4	...	4	·01	...	·01	1·15	23
...	...	...	...	...	...	.....	...	...	...	...	...	·01	24
...	...	...	...	...	...	9	...	9	·04	...	·02	·04	25
...	...	...	...	...	...	.....	...	...	...	...	...	·06	26
...	...	...	...	...	...	1	...	1	...	...	...	·65	27
...	...	...	...	...	...	.....	...	...	...	...	...	·10	28
142	450	1,021	1,318	1,377	1,679	4,381	3,998	8,379	·44	·44	·44	2·76	

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